Prize Contests Are Feature of Drive By New Orleans Dealers

(Concluded from Page 1, Column 5)

24,000 families who could afford automatic refrigeration, but did not have it. To this group of "live prospects," the campaign's message of economy in refrigeration is particularly directed. All of the "prospect" families have incomes of more than $1,500 a year.

Campaign slogan, "An Electric Refrigerator is Cheap to Buy—Cheap to Use," is being promoted through newspaper advertising, over the radio, through car cards, billboards, and streamers in dealers' windows.

Seven large size newspaper advertisements began appearing June 13, for a total of 28 insertions. First two advertisements were of a general institutional nature to promote the slogan. Others feature the "Prize Statement Contest," the first of these appearing July 5.

Approximately 200 regular-size car cards, carrying a compelling institutional message and the slogan, were placed in all cars and buses on June 13, to remain through the month of August. A double-size car card was used in the cars and buses on July 5 to publicize the statement contest.

NO MEDIUMS NEGLECTED

Beginning July 5, radio spot announcements publicizing the contest over two local stations were used for a three weeks' period. There were approximately eight spot announcements per day.

Nine prominent billboard locations through the city are being used to promote the campaign slogan from June 13 to Sept. 1.

The prize statement contest is designed to help sales in two ways. First, entries must be submitted on an official entry blank, which can be obtained only at stores cooperating in the campaign; and the blank must be signed by a refrigeration salesman, thus bringing prospects into the store and providing an opportunity for a sales interview.

LEARN ECONOMY STORY

Secondly, persons entering the contest must thoroughly familiarize themselves with the economy story of electric refrigeration—they must literally sell themselves in order to write a strong statement.

Any customer entering the contest may purchase an electric refrigerator during the contest period. Should he win one of the prize refrigerators, he may exchange it for the refrigerator purchased—regardless of the price paid—entirely without cost. All payments made up to the time of the purchase will be returned in cash.

'BUY NOW' HOOKER

Although the average price of the prize refrigerators is $170, should the prospect purchase a $300 model and win in the contest, he will win the more expensive model of his own choosing rather than the cheaper prize refrigerator. This provides a forceful "buy now" argument to use on prospects.

Every refrigerator sold between July 1 and Aug. 13 entitles the salesman to 30 chances at sweepstakes prizes ranging from $2 to $20 each.

Each dealer cooperating in the campaign has been supplied with sweepstakes tickets, of which one is awarded to the salesman for each refrigerator sold and delivered. The dealer forwards each ticket awarded to the Electrical Association. Sweepstakes ticket stubs must be retained by the salesman and presented in person in claiming prizes. Drawings, made at regular bi-weekly breakfast sales meetings are as follows: first prize, $20; second prize, $15; third prize, $10; 12 prizes of $5 each; 15 prizes of $2 each.

Get New Jobs

P. Y. DANLEY

S. F. MYERS

The salesman must be present at the meetings to win. In case a ticket is drawn and the salesman to whom it belongs is not present, an additional ticket will be drawn. (Credit for sales to apartment houses will not be allowed in excess of three household units.)

Each ¼-hp. of new commercial refrigeration equipment sold entitles the salesman to a sweepstakes ticket, and tickets for commercial sales are included in the three bi-weekly prize drawings. Credit is allowed for not more than 3 hp. on any one installation, whether consisting of one or a number of motors.

HOLD PEP MEETINGS

First of a series of breakfast sales meetings was held on June 13, when the general outline of the campaign was discussed. The June 27 meeting was addressed by Dr. G. W. Allison of the Modern Kitchen Bureau.

In addition to the sweepstakes drawings a $20 cash award is being given to the salesman whose signature appears on the statement contest entry blank submitted by a prize-winning contestant—sole provision being that no salesman is eligible to win more than one $20 prize award.

Statement contest entries, to be eligible for awards, must carry the signature of a refrigeration salesman in the store from which they were obtained. Thus every person interested in entering the contest gives the salesman another chance at a $20 statement contest award. Four hundred dollars has been set aside for these extra prizes.

As a further aid during the contest, beginning June 20 and continuing through Aug. 13, New Orleans Public Service is paying its employes commissions for supplying leads on any make refrigerator which result in sales.

Prospects must indicate on the lead card a preference as to make of refrigerator and dealer, and the lead will be turned over to the dealer specified. Only leads signed by the prospect will be accepted.

Myers Asst. Manager of Westinghouse Cooling

MANSFIELD, Ohio—Appointment of S. F. Myers as assistant manager of Westinghouse Electric & Mfg. Co.'s reorganized air-conditioning department, with his headquarters in Chicago, has been announced by the company.

As reported in last week's NEWS, P. Y. Danley has been named manager of the air-conditioning department of the company, headquarters of which will be located at the East Springfield, Mass. plant. Changes will be effective Sept. 1.

Mr. Danley, who will be responsible for all Westinghouse commercial and household air-conditioning activities, has appointed H. F. Hildreth to direct the sale of home air-conditioning equipment.

Regarding the establishment of a Chicago office, with Mr. Myers in charge, the company's announcement said that it was felt that more efficient customer service would be given through the maintenance of an office in a midwest territory.

The new Westinghouse department, it was said, will function as a separate organization, and will not be directly associated with the present merchandising division, as it has been in the past.

Home Refrigeration Opens

CHARLESTON, W. Va.—Home Refrigeration, Inc., under the management of Richard Post, has opened as a Kelvinator dealer at 15 Capitol St.

Price-Fixing Charged In Calcium-Chloride Field

(Concluded from Page 1, Column 4)

Sales Corp. Also named was the Calcium Chloride Association, trade organization supported by the companies.

The commission charges that the companies, acting directly and through their association, in order to better effectuate their agreement to fix and maintain uniform prices, have maintained a uniform zoning system for the United States; suggested retail prices to their individual dealers or distributors; exchanged information with reference to the prices each charges for calcium chloride and concerning their yearly distribution of the product; changed simultaneously, in the same amounts, their sales prices, and offered identical bids for carload and less than carload lots of their product to prospective purchasers.

Since 1937, it is further charged, the respondents have, by agreement, eliminated cash discounts for prompt payment by purchasers.

The Calcium Chloride Association's operation expenses, the commission alleges, are prorated among the member companies according to the estimated yearly income of each: Dow Chemical Co. and Solvay Sales Corp. each paying 32½% and Columbia Alkali Corp. and Michigan Alkali Co. 17½% each.

In 1938, when the budget of the respondent association was increased, the members made identical raises in calcium chloride prices, the commission charges.

The complaint states that the acts and practices charged have hindered and prevented price competition between and among the respondent companies; have placed in them the power to control and enhance prices; have created in them a monopoly in the sale of calcium chloride, and constitute unfair methods of competition within the intent and meaning of the Federal Trade Commission Act.

Clark Heads Home Planning Dept. of Westinghouse

(Concluded from Page 1, Column 3)

cial refrigeration sales manager, has been appointed manager of the commercial refrigeration department.

I. W. Clark, formerly in charge of electric kitchen sales, has been made manager of a newly organized home planning department in the merchandising division of the company.

A new headquarters department, to be known as the sales development department, has been formed, Mr. Imhoff's announcement said. Appointment of a manager of this department will be announced later, as will announcement of the personnel and organization of other departments of the division.

Hartmeyer Joins Staff Of Simon Corp.

BALTIMORE — William Hartmeyer, for a number of years connected with the laundry equipment division of the General Electric organization, has joined the staff of Simon Distributing Corp., Hotpoint distributor.

HANDLE A COMPLETE LINE THAT IS PRACTICAL—DEPENDABLE—PROFITABLE

GR Lipman COMMERCIAL REFRIGERATION

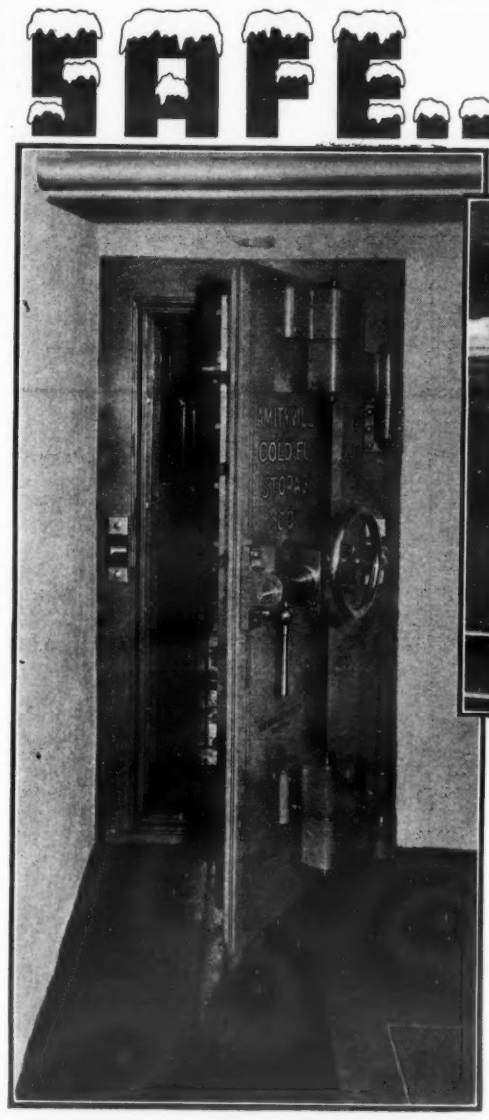
Includes every size and type of equipment you need to bid successfully on all kinds of refrigeration and comfort cooling jobs.

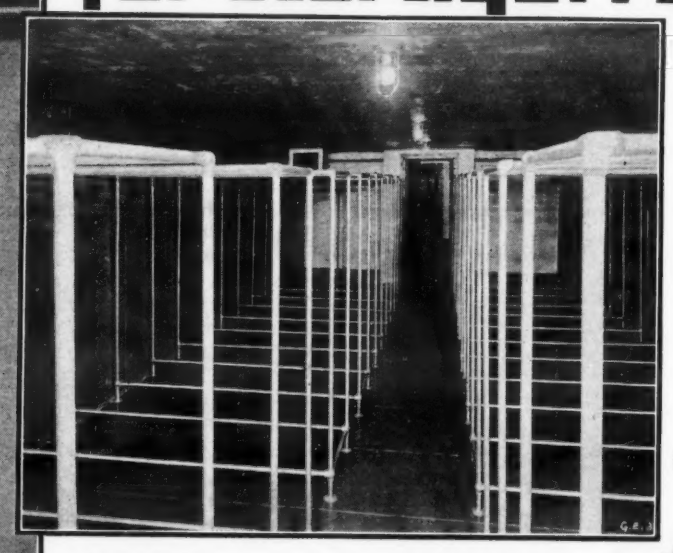
GR AIR CONDITIONING

Write for information covering the GR-Lipman distribution plan.

GENERAL REFRIGERATION CORPORATION
Dept. F-2, Beloit, Wisconsin, U.S.A.

SAFE... for storage... with Valves by A-P





● Installation
Bendursky Fur Storage
Amityville, Long Island, N. Y.

● Installed by
Rex Cole, Inc.
Long Island City, N. Y.

● Equipment
General Electric

● Valves A-P

Summer protection of expensive furs places exacting demands on Air Conditioning and Refrigeration Equipment. . . . For thousands of dollars in furs, and the goodwill of a community depend upon the maintenance of constant cold temperatures and the proper humidity ideally suited to fur storage. Here, too, the dependable and consistent efficiency of A-P Valves provides service-free operation that means complete customer satisfaction.

That's why A-P Expansion Valves and Solenoids are being used so extensively, and praised so enthusiastically by the leading engineers in the industry. A-P Valves enjoy a well-earned fame for Dependability, for leakproof supersensitivity and accuracy of temperature control that ordinary valves cannot equal.

Why not "switch to A-P" on YOUR next job? You'll enjoy the results!

AUTOMATIC PRODUCTS COMPANY
2450 NORTH THIRTY — SECOND STREET
MILWAUKEE WISCONSIN

Refrigeration Parts Jobbers, Who Recognize Quality, Stock A-P Valves.

REX COLE INC. 25-11 HUNTERS POINT AVE. LONG ISLAND CITY, N. Y.

April 29, 1938.

Automatic Products Company
404 Fourth Avenue
New York, N. Y.

Attention Mr. A. Brandt

Gentlemen:

We are pleased to state that with the use of the Automatic Products Company thermostatic expansion valve, we have reduced our service calls, that may be attributed to expansion valves by some thirty per-cent, and can recommend the application of the Automatic Products Company thermostatic expansion valve for all applications used in the refrigeration industry.

We have used this valve exclusively for the past two and one-half years with very satisfactory results.

Very truly yours,
REX COLE, INC.
J. R. Rock
MANAGER
COMMERCIAL INSTALLATION
AND SERVICE DEPARTMENT

JLRoth:mef

Model 78 Solenoid
Model 220-K 8-15 Tons Freon Thermostatic Expansion Valve
Model 205 ⅛ to 2 Tons Freon Thermostatic Expansion Valve
Model 70-N Solenoid

GENERAL ELECTRIC TEN BEST HOME SERVANTS

DEPENDABLE
THE BYWORD FOR A-P VALVES

PERIODICAL

First Copy

Air Conditioning & Refrigeration News

PUBLIC LIBRARY DETROIT

The Newspaper of the Industry

Trade Mark Registered U. S. Patent Office. Established 1926 as Electric Refrigeration News
Member Audit Bureau of Circulations. Member Associated Business Papers.

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TWENTY CENTS PER COPY

THE COLD CANVASS

By B. T. Umor

Plea For a Man Without a Country

Alfred Reichsfeld is 61 years old. For the last 40 years he has been an independent manufacturer, taking great pride in the refrigeration systems and confectionery machinery he turned out. He asked for nothing better than the opportunity to work day by day, to turn out a good product, and to support his family in comfort.

Today his world is demolished. His business, his life savings, his property—all have been confiscated. And, like thousands of other "non-Aryan" citizens of Austria, through no fault of his own he must haul stakes and leave all that is near and dear to him.

Torn from his wife, his son, his business, his friends, his native land—and for no reason that makes sense to his logical mind! Read his dignified, yet heart-wrenching letter (translated from the German by Alfred Jones of the NEWS editorial staff).

"Frigomat"
Electric-Automatic Cooling
36 Laxenburgerstrasse, Vienna
July 16, 1938

Dear Mr. Taubeneck:

When you came to Vienna on your trip around the world you saw us. *In Vol. 19, No. 12, Serial No. 400 of Nov. 18, 1936, on page six you had a photograph under the title "Frigomat Factory and Its Leaders"—"Entrance to the factory and (2) The Mayer family, which guides the destinies of Frigomat."*

Today I come with a great request.

The conditions in our country have changed so much that it is impossible for a non-Aryan to live here. I must dispose of my business, and dare not seek a new acquisition here. My son, the young man who has worked with me his whole life, has already through the intercession of friends obtained an affidavit and hopes to be able to travel to America in two months.

My wife, who is an Aryan, will live in Vienna a while longer to put her affairs in order, but I myself must even today seek the possibility of a journey to America, and, if you would, could you please provide me with an affidavit today.

I am a trained mechanic and manufacturer and electrical engineer. I have for 40 years been an independent machine maker and specialist in confectionery machinery and cooling equipment. I admit I am 61 years old, but physically sound, healthy, and robust, willing to work, and would not be a burden to anyone, as I shall always be able to earn my own bread by my professional ability as an all-around mechanic.

My military statement of identification is: Alfred Reichsfeld, mechanic, born in Cvrcov in Mahren (Czechoslovakian Republic) on Aug. 25, 1877, citizen of Vienna, married, religion Roman Catholic, residing in Vienna 10, Laxenburgerstrasse 36.

My dear Mr. Taubeneck! I truly understand that I have no real claim on you, except that I have been reading your newspaper for many years, but I believe that you are a good and kind man and that you believe in a God who rewards all kind deeds.

Perhaps my letter comes at the right moment for you, and you will fulfill my request. In any case, I ask a brief note to let me know if, in the circumstances, my request reached you.

My heartfelt thanks in advance.

Respectfully,
ALFRED REICHSFELD

(Concluded on Page 2, Column 5)

Air Control Lessens Hospital Deaths, Records Show

BROOKLINE, Mass.—Air conditioning would seem to have proven itself a real "lifesaver" in the record of its use at Corey Hill hospital here, which installed an air-conditioning system especially designed for hospital use last year.

Dr. Young reports that of 743 operations performed at the hospital during the past year, only one case of post-operative pneumonia developed and that case showed quick recovery.

Formerly, according to a Massachusetts General Hospital survey, post-operative pneumonia might be expected in 6 to 7% of operations.

"The unusually small number of deaths and the occurrence of but one case of post-operative pneumonia," says Dr. Young, "would seem to indicate that air conditioning may have been a beneficial factor."

Dr. Young raises the question of whether the low relative humidity, which was kept at 30%, with a margin of not more than 2% either way, except during operations in the amphitheater, might not have been a factor in the unusually low death rate in the series of operations. Of the total number of operations mentioned, only nine deaths resulted, six of them hopeless cancer cases.

Patients in the hospital have enjoyed during the summer months an artificial climate of 78° when outside temperature was 95°.

Ranco Introduces New Commercial Control

COLUMBUS, Ohio—A commercial control of entirely new design, said to have a wider range than any other control now on the market, has just been announced by Ranco, Inc. here.

Known as Ranco Type "G," the new control is adaptable to pressure and temperature, heating, or cooling. It is made for use on all refrigerants.

Small and compact, the control nevertheless has a high horsepower rating—1½ hp. rated capacity on 110-220 volts a.c., and the same rating when used without motor overload protection on 115-230 volts d.c.

A supplementary permanent magnet, giving a magnetic blow-out at

(Concluded on Page 7, Column 3)

Conditioning Cuts Noise Hazard, Reports A.M.A.

NEW YORK CITY—That noise in our large cities is a health hazard which can be largely eliminated from office buildings by installation of air conditioning, was brought out in a recent report of the Committee on Air Conditioning of the American Medical Association.

"In noisy industrial employments it is not unusual to find in workers below 30 years of age as many as 50% with some degree of impaired hearing," declares the report. "This deafness constitutes the most serious and tangible of the ill noise effects, but there is, in addition, a host of scarcely measurable injuries made

(Concluded on Page 5, Column 1)

Boston Installations Again Show Gain

BOSTON—Air-conditioning installations in the metropolitan Boston area, comprising an area some 30 miles in radius from Boston and covering many cities and towns, totaled 23 jobs in June and 12 more in July up to the 28th of the month. June connected horsepower load added to Boston Edison's business was 177. For the first seven months there were 64 installations.

Appliance Men On West Coast Form 'Institute'

Distributors, Manufacturers Organized To Improve Trade Relations

SAN FRANCISCO — Incorporation papers for the formation of the Pacific Appliance Institute, which will be composed of leading West Coast distributors and manufacturers of refrigerators, radios, and other household appliances, have been filed with the State of California.

The institute has been organized as a clearing house between manufacturers and distributors in which better trade relationships between the two groups and retail dealers could be developed.

N. J. Etienne, former western representative for Zenith Radio Corp., is managing director and secretary-treasurer of the institute, which has executive offices in the Western Merchandise Mart here.

Mr. Etienne has been in charge of the appliance department of Chanslor & Lyons Stores, Inc., here for the past 10 years.

Objects and purposes of the institute, according to the by-laws, are to devise ways and means for bettering the condition and advancing the interests of those engaged in the appliance business in the State of California, particularly northern California; to foster friendly and harmonious relations among those engaged in the industry, to disseminate knowledge among its members as to scientific management and merchandising.

To formulate and encourage ethical

(Concluded on Page 16, Column 4)

Sam Mitchell Resigns Kelvinator Post

DETROIT—Resignation of Sam C. Mitchell from his position as director of advertising and sales promotion of Kelvinator division, Nash-Kelvinator Corp. has been announced by H. W. Burritt, vice president.

Mr. Mitchell joined the Kelvinator organization in 1932, following service with Hudson Motor Car Co. and Reo Motor Car Co. in executive sales posts.

After rising from sales manager of Kelvinator's Buffalo branch to special field representative to district sales manager, Mr. Mitchell was named advertising manager of Leonard Refrigerator Co. in 1933. It was in 1935 that he was placed in charge of Kelvinator's advertising and sales promotion.

Dealers Say Chain Stores Misuse Brand Names

STROUDSBURG, Pa.—A new and objectionable method of refrigerator merchandising by chain stores here is reported by local independent dealers.

When a customer calls one of these chain stores and asks if they carry in stock some nationally advertised brand of electric refrigerator, the clerk replies that they have it in stock but that it is sold under the store's brand name in order to sell it at a lower price.

Dealers in this area have been verifying these reports from customers by personally calling the stores and asking for a number of well-known refrigerators. In each instance the stores replied that they carried the line made by that manufacturer, but that it was being sold under the store's brand name.

"So far nothing has been done

(Concluded on Page 2, Column 2)

A.S.R.E. To Sponsor Food Conference October 20-21

KNOXVILLE, Tenn.—A wide variety of current problems in the food industries—quick freezing, marketing of frozen foods, enzymes, vitamins in frozen foods, the control of bacteria with light—will be discussed by experts at the Food Preservation Conference which will be held at the University of Tennessee here Oct. 20 and 21.

This event is being sponsored jointly by the university and The American Society of Refrigerating Engineers, with J. Mack Tucker of the Tennessee Valley Authority in charge as general program chairman.

The A.S.R.E. is convinced that this conference will prove to be of great practical value to men in different branches of the food industries in Tennessee and surrounding states, after the large crowd registered at a similar conference at Pennsylvania State College this past June, says David L. Fiske, executive secretary of the society.

Practical benefit was derived not only from the talks presented by the authorities, but also in great degree from the informal discussion by men in the audience who are actually working daily with various refrig-

(Concluded on Page 2, Column 1)

F. G. Hood, President, Founder of Ansul, Dies Suddenly

MARINETTE, Wis. — Francis George Hood, president and founder of Ansul Chemical Co. here, manufacturer of sulphur dioxide and methyl chloride refrigerants, died Aug. 9 within half an hour after having been suddenly stricken with a heart attack while attending his firm's annual picnic in Henes park, Menominee, Mich.

Seemingly in good health, Mr. Hood had apparently enjoyed the games, races, stunts, and other features of the afternoon program. He suffered the heart attack just as the crowd was assembling for the picnic supper. He was rushed to a hospital, but medical assistance proved futile.

Born in Saginaw, Mich. Aug. 21, 1878, Mr. Hood would have celebrated his sixtieth birthday this month.

After attending school at Saginaw, Riverview military academy, and Brown university, Mr. Hood began his business career in the lumber

(Concluded on Page 16, Column 3)

REA Gives Conditions of Storage Plant Loans

WASHINGTON, D. C.—Loans for constructing community refrigeration plants will be made by the Rural Electrification Administration to sponsors of REA-financed electric distribution systems, the REA information service reports, providing these proposed plants are, in the opinion of the administration, economically feasible and socially desirable.

The first community refrigerated storage plant to get an REA allotment is to be built near Piqua, Ohio. See story on page 1 of July 20 issue of the NEWS.

Any plants constructed by means of such loans must, of course, be connected to existing REA-financed distribution lines and be erected for the benefit of customers along those lines.

The REA wishes to make it clear, however, that all such financial assistance is in the form of loans, and that no outright grants of any kind are made by the administration.

Sparton To Stop Advertising Its Economy Claim

Enters Stipulation With FTC on Refrigerator Comparison Story

WASHINGTON, D. C.—The Federal Trade Commission announced Aug. 10 that a stipulation had been entered into by the Sparks-Withington Co. of Jackson, Mich., under which the company agrees to cease making certain alleged misrepresentations in connection with the sale of Sparton electric refrigerators.

The Commission said that the representations to be discontinued are that the Sparton refrigerator has greater economy by any specific percentage, and that it is more efficient in preserving food, unless the type of refrigerator to which Sparton is compared is stated, and unless the claims of economy and the assertion concerning food preservation are substantiated by competent tests.

The company is also to cease advertising that the Sparton refrigerator is 100% automatic, unless such representation is limited to those of the refrigerator's mechanical units which are in fact automatic.

San Antonio Dealers Stage Cooperative Refrigerator Drive

SAN ANTONIO, Tex.—Plans for a 60-day refrigerator merchandising campaign, designed to take advantage of the extremely hot weather here during August and September, were completed last week by members of the San Antonio Radio & Refrigeration Trades Association.

Supporting the drive are the 12 local distributors and the commercial division of San Antonio Public Service Co. A membership drive will be promoted at the same time, so that dealers who are not now members of the association also may take part in the campaign.

The drive follows closely one recently successfully staged by Houston refrigeration dealers, with changes to meet local conditions.

San Antonio Public Service Co. will furnish the association with a complete list of those users of electricity whose monthly accounts run less than 60 kwh., indicating the lack of electric refrigeration in the home.

These names will be furnished to the dealers at a cost of three cents each, and in turn will be turned over to the salesmen of these respective dealers, who will call on the homes, asking housewives three questions:

1. Amount spent for ice per week.
2. Amount spent for food per week.
3. Number in the family.

Cards are supplied the salesmen on which these three questions are printed, with sufficient space for answers to be written in. To make it

(Concluded on Page 16, Column 2)

Georgia Power Turns Again To Refrigerator Drive

ATLANTA—With quota set at 600 domestic refrigerators and 200 commercial units of $100 each, Georgia Power Co.'s first strictly electric refrigeration campaign in three years is now under way.

The drive started Aug. 8 and will run through Sept. 21. It will be supported throughout by advertisements in daily and weekly newspapers. Men in each classification who reach their quotas first will be awarded $10 bills.

A.S.R.E. To Sponsor Food Preservation Conference In Knoxville Oct. 20-21

(Concluded from Page 1, Column 4)

eration problems in connection with foods, Mr. Fiske points out.

The Food Conference will be publicized in Tennessee and nearby states among men in all branches of the food business and refrigeration, and a large crowd is anticipated.

Tentative program for the Conference is as follows:

Thursday, Oct. 20

9:00 a.m. Registration—Ferris Hall.

10:00 a.m. First Session.

Address of Welcome—Dean C. E. Ferris, College of Engineering.

"Refrigeration—A Vital Factor in the Food Industry," David L. Fiske, executive secretary, A.S.R.E., New York.

"The Meat Packing Industry," Henry D. Tefft, American Institute of Meat Packers, Chicago.

"Effect of Humidity on Food Products in Storage," A. J. Hecker, St. Louis Cold Storage Co., St. Louis.

12:30 p.m. Welcome luncheon for all members and guests of the conference. Speaker, Dr. F. B. Ward, economics department, University of Tennessee.

2:30 p.m. Second Session, Chester Lichtenburg, General Electric Co., chairman.

"Bacteria—The Friends and Foes of the Food Industry," Dr. P. W. Allen, professor of bacteriology, University of Tennessee.

"Enzymes — How They Behave," Professor G. A. Shuey, University of Tennessee experiment station.

"Vitamins and Quality of Frozen Foods," Gerald A. Fitzgerald, General Foods Corp., Boston.

"Control of Molds and Bacteria with Light," Dr. Harvey Rentschler, Westinghouse Lamp division, Bloomfield, N. J.

8:00 p.m. Motion pictures and demonstration: Glass Evaporator—Alco Valve Co.; Locker Plants—A. A. Geiger, York Ice Machinery Corp.; Frozen Foods—General Foods Corp.

Friday, Oct. 21

9:00 Third Session, W. R. Woolrich, chairman.

"Cold-Packing Fruits and Vegetables," C. T. Baker, consulting engineer, Atlanta, Ga.

"Quick-Freezing Fruits and Berries," R. B. Taylor, University of Tennessee engineering experimental station.

"Marketing Frozen Foods," Harry Carlton, University of Tennessee marketing specialist.

"Ice Crystal Formations in Frozen Foods," Dr. J. G. Woodruff, University of Georgia experimental station.

2:00 p.m. Fourth Session, Professor C. E. Wylie, chairman.

"Quality Control in the Manufacture of Butter, Cheese, and Ice Cream," Professor T. B. Harrison, University of Tennessee College of Agriculture.

"Refrigeration on the Farm," C. J. Hurd, Tennessee Valley Authority.

6:30 p.m. Informal dinner, S & W Cafeteria Banquet Room. Speaker, Dr. L. V. Burton, editor, Food Industries.

Say Chain Stores Mislead Prospects on Names

(Concluded from Page 1, Column 3)

about it by local dealers," said Robert Bixler, local G-E dealer, "but it is evident that this is unfair competition and should be dealt with by the Better Business Bureaus in the towns where such methods are used. It is unfair to the customer as well as to the competing dealer, and is a misrepresentation of the most serious kind.

"The local dealers would also like to know whether manufacturers who make the refrigerators for chain stores approve of twisting their selling methods to the detriment of the approved dealer outlets."

Hastings' To Retail Norge In Bartow, Fla.

BARTOW, Fla.—Hastings' Super Service has been appointed local Norge appliance dealer by Norge Nestor Co., distributor. Mrs. Fred Hastings is owner of the dealership, and Frank White is service manager.

He Must Have a 'Hot' Prospect

In the modern style of doing things Solon Sprinchorn, Airtemp dealer in Jamestown, N. Y., rushes one of the new Airtemp winter air conditioners back to his store by airplane. In this scene just before the takeoff from Dayton's municipal airport are (left to right) R. C. Robertson, Airtemp regional engineer; Mr. Sprinchorn; A. P. Livar, chief engineer, heating division, Airtemp, Inc.; A. R. Fors, vice president in charge of production, Airtemp, Inc.; A. E. Stratton, treasurer, Coleman-Stratton, Inc., Buffalo Airtemp distributor. In the plane are Kenneth Schroeder, pilot; and C. W. Millsom, Jr., territory representative for Coleman-Stratton.

'Forget Politics and the Weather, Talk About Your Product,' Milwaukee Salesmen Told

MILWAUKEE — "Electrical appliance sales in Milwaukee can be increased from 25 to 40% by hard work and intelligent selling," declared Harry B. Hall of Klan, Van Peterson & Dunlap Associates, advertising agency, in an address presented at the recent meeting here of the local electrical trade, held as part of the National Salesmen's Crusade.

Milwaukee market saturation for electric refrigerators is 37.7%, for electric washing machines 80.5%, for electric ranges 14%, and for electric ironers 5.9%, Mr. Hall said.

"The Milwaukee market for electric refrigerators," he stated, "is something like 175,000 and only 66,000 have been sold in a period of approximately 10 years."

RANGE MARKET 100,000

This saturation, he pointed out, is 11.7% below the national saturation of 49.4%.

"The total market for electric ranges in Milwaukee," Mr. Hall continued, "is estimated at 100,000, with only 14,000 thus far sold.

"The national average of saturation on electric washing machines is 55.5%, while Milwaukee is way ahead of the rest of the country in that our degree of saturation on washing machines is 80.5%.

"About 99% of the families of Milwaukee, including those on relief, are owners of radios, but we are not even approaching the saturation point on radios. The big radio market in Milwaukee is in completely equipping Milwaukee families with radios upstairs, downstairs, and outside in the garden.

EMPLOYMENT GREATER

"The electrical appliance salesman should always keep in mind the fact that if he can make his prospect want the article he has to sell badly enough, some other expenditure will be foregone and his article will be bought."

Mr. Hall called attention to the fact that factory employment in Milwaukee today is over 30% greater than it was in 1933, and payrolls are greater by over 100%.

"Both are greater than in 1929 when we had so much prosperity," he added.

Several "don'ts" for sales people were listed by Mr. Hall, among them being the following:

"Don't forget that the basic desire of human beings is for things and not for money.

"Don't count on fancy selling ideas and sales psychology to take the place of hard work.

TALK ON GOODS

"Don't waste time with the prospective customer in the discussion of politics, economics, or the weather. Statistics indicate that too many salesmen spend 75% of their talking time on the political and economic situation, 15% on the weather, and only 10% in talking about the goods they have to sell.

"Don't 'pad' your call record. In doing so you are fooling yourself more than the boss.

"Don't succumb to the urge to lay off on all of the many holidays—and every time the baby has a new tooth."

Mr. Hall also brought out the information that in the past five and a half years, the sale of kilowatt hours in Milwaukee has increased 49.3% while the cost of electricity to the public in the same period has been reduced 39.4%.

Refrigerator Sales Far Ahead In Virginia

ALEXANDRIA, Va.—Unit sales of electric refrigerators in the territory of Virginia Public Service Co. during July totaled 709 units, far more than total unit sales of all other major appliances combined. Total dollar volume of major appliance sales for the month was $168,042.

Unit sales of other major appliances in the company's territory for July were as follows: ranges, 101; commercial refrigeration, 58; milk coolers, 2; water heaters, 22; ironers, 6; washers, 293.

Bruesch Establishes Store In West Bend, Wis.

WEST BEND, Wis. — Robert Bruesch, formerly of Milwaukee, last week established an appliance store here featuring Estate electric ranges, RCA radios, and other units. He is being assisted by his brother, Theodore Bruesch.

THE COLD CANVASS

By B. T. Umor

(Concluded from Page 1, Column 1)

Wanted: An Affidavit

What Mr. Reichsfeld wants is an affidavit from some responsible American citizen, or group of citizens, that he will be given a job, or have his livelihood secured, when he arrives in America.

Anyone who signs such an affidavit assumes legal responsibility for Mr. Reichsfeld, as well as responsibility for keeping him off the Relief rolls. This responsibility extends until such time as Mr. Reichsfeld becomes an American citizen.

As matters stand now, there are said to be more than 650,000 "non-Aryan" citizens of the Reich who must either leave or starve. When they leave, they can take with them neither money nor personal property.

The unemployment situation being what it is around the world, few nations are anxious to receive refugees who bring nothing with them but the clothes they wear.

This leaves the persecuted Jews in the humble position of having to depend upon friends or relatives in outside nations to find work for them.

Has some reader of the NEWS—some firm with a big heart—a place for a skilled craftsman, refrigeration engineer, and toolmaker in his organization?

* * *

The New Factory

Two years ago when a manufacturer was building a new plant he specified that the floors should be of red concrete. "It will look more cheerful than the standard gray," he explained, "and I believe will seem softer to the workers who walk on it."

The experiment justified his expectations, writes Allan H. Gilmore in Nation's Business for August. Innovations of this sort in industrial construction are many. They are aimed at greater safety, more comfort for the workers, better lighting, straight-line production, fireproofing, and smoother transportation of both raw materials and finished product.

Structures are uniformly lower in height and usually farther removed from the heart of urban centers. Built-in conveyors and use of trucks and overhead cranes have been adapted to a wide range of operations. Offices are likely to be housed under a separate roof.

The factory is coming to be a thing of beauty as well as utility.

* * *

More 'Crusade' Results

One of our acquaintances who still uses an ice refrigerator reports that the Kelvinator "National Salesmen's Crusade" has been extended to unexpected places.

The other evening the puffing ice man entered our friend's kitchen, hauling a dripping block of cold. Perched on the side of his jaunty cap was a little red, white, and blue button, "Sales Mean Jobs."

ARTIC has been a preferred refrigerant for automatic systems for 17 years. Today, 35 leading manufacturers use it in original charging. They know it has the right thermal properties for efficient refrigeration—quick cooling—low power consumption—low head pressure.

Service men find it pays to recharge Methyl units with ARTIC, for they are sure of a highly pure product, low in moisture and acidity.

Stocks in standard containers

in principal cities assures prompt delivery. Write for current issue of "ARTIC Service News"—up-to-date information about servicing, distribution points, ect.

DU PONT
REG. U.S. PAT. OFF.

E. I. DU PONT DE NEMOURS & COMPANY, INC.
The R. & H. Chemicals Dept., Wilmington, Del.
District Sales Offices: Baltimore, Boston, Charlotte, Chicago, Cleveland, Kansas City, Newark, New York, Philadelphia, Pittsburgh, San Francisco

ARTIC—*The preferred Methyl Chloride for service work*

Outsell all others with

Copeland

Commercial Refrigeration

The efficiency, economy and dependability of all Copeland Commercial Units make prospects easy to find, make sales easy to close. Our twenty years of leadership in commercial refrigeration are evident in every unit.

HIGHEST EFFICIENCY!

LOWEST OPERATING COST!

LONGEST TROUBLE-FREE SERVICE!

COPELAND REFRIGERATION CORPORATION, Sidney, Ohio
INVESTIGATE COPELAND'S COMPLETE LINE OF HOUSEHOLD REFRIGERATORS AND WATER COOLERS

SEALED AND DEHYDRATED

LINDERME

SEAMLESS Copper TUBING

LINDERME TUBE COMPANY

CLEVELAND OHIO, U.S.A.

Profitable Sales Ideas

Demonstration of 'Meat Keeping' In a Retail Meat Store Aided By Butcher's Unbiased Sales Talk

ALBION, Mich. — Demonstrating the Westinghouse "meat-keeper" in a local meat market proved a successful promotion idea for C. F. Wickens, appliance dealer here. For a period of several weeks a 7-cu. ft. Westinghouse box was kept on display, and people who evinced an interest were shown how the unit operated by the butcher in charge of the market.

During these demonstrations particular emphasis was placed on the use of the "meat-keeper" to preserve a supply of fresh meat at all times.

BELIEVE THE BUTCHER

Mr. Wickens reports that people interested in refrigeration placed more value on what they were told by the butcher than on any argument advanced by himself or his salesmen. By keeping the unit on display for several weeks a number of sales resulted, he said.

Before going into the appliance business on his own 18 months ago, Mr. Wickens worked one year for the local General Electric dealer. Prior to that time he operated a tire and battery business in Albion for a period of nine years.

Most sales are closed in the homes of prospects, Mr. Wickens said. "When they get in the store they just seem to wilt—but when I can talk to them in their own kitchen, then we can do business."

In addition to Westinghouse refrigeration and ranges, Mr. Wickens sells Link-Belt and Master stokers.

"I sold 9 or 10 units through the fall last year, and expect to do even better this year. Stokers help to fill in between the spring refrigeration selling season and my Christmas business on small appliances."

FAVORS FINANCE FIRMS

Mr. Wickens favors selling all of his paper to finance companies. "People will pay the finance companies, and there is little trouble, but when I sell a small appliance on credit and carry the paper myself, I usually have a hard time getting the money. I get it all right, but it is often a long process.

"Some dealers here in Albion have sold irons and roasters for 50 cents a week but it has not worked out well for me. I do a good cash business on small appliances at Christmas time and am about ready to let the 50-cent-a-week business go to someone else."

Mr. Wickens is assisted in his business by his son, who looks after the store while he is out selling. "I have to go out after business to get it—that's the only way."

Display Trailer Used To Sell Builder as Well as Homeowners In Outlying Residential Areas

PEORIA, Ill.—Another example of how display trailers can be used by appliance outlets to get more customers, to make more sales per customer, to sell higher priced items, and to make sales during slack seasons is offered by the appliance department of P. A. Bergner & Co., local department store.

When E. A. Favorite, manager of Bergner's appliance department, saw little homes springing up on the outskirts of this city, he realized that those homes offered a promising market for electrical appliances, but that, with the Bergner store miles away, the chances of getting the builders or owners of these homes onto his sales floor were mighty slim.

So, seeing little hope of the market ever coming to the store, Mr. Favorite determined to literally pack the store up and take it to the market—by means of a display trailer.

APPLIANCES DISPLAYED

The 12-foot trailer used was purchased, stripped for display, at a cost of $300. Displayed in it are two ranges, one heater, a washing machine, and various small appliances.

Favorite stunt of the trailer crew is to get to the suburban location of a new house before even the lumber for the building arrives. By contacting the builder at this time, when he probably has not yet purchased appliances for the home although he is doubtless considering the problem, the trailer crew has made many profitable deals.

Not always, of course, does the trailer crew get the jump on the field by selling to builders. But owners of these new homes, too, have proved a vulnerable market for the Bergner salesmen.

HOW THEY OPERATE

Usual crew on the trailer consists of two men, each of whom covers one side of a street. While one salesman has a customer in the trailer, the other is knocking at house doors in search of more live prospects. Only prospects who seem "sellable" are invited into the trailer; the others are merely handed advertising literature. By this technic, congestion in the trailer is avoided. But Bill Williams, member of the trailer crew, estimates that 90% of the housewives would visit the trailer if invited to do so.

Occasionally only one salesman is used in the trailer. On such trips, a Western Union boy is sent ahead with messages preparing the housewives for the trailer's appearance. This scheme is reported to have worked very well.

Although a good deal of interest is stimulated during the day, most actual sales are closed on return calls in the evening, when husband and wife can examine the merchandise together.

EVERY HOUSE IN BLOCK

Star example of the trailer's success is shown by results on one local suburban street which has 12 homes on it. Sales were made to every one of these homes, each sale averaging around $200. Most sales will average about this amount, the trailer men report, due partially to the fact that these new homes frequently need to be completely outfitted with appliances.

More higher priced items are consistently sold from the trailer than would be sold to the same customers at the store, department officials say, for by catching these customers at a time when they have not yet dogmatically decided upon the highest price they will pay for an appliance, the salesman has an excellent opportunity to convince them of the value of the higher-priced models.

In fact, only appliances of the highest quality are exhibited in the trailer. This relieves the salesman of any necessity for sales comparisons, Mr. Williams points out, and he can concentrate on selling the customer on the merits of the particular item in question.

Although the trailer is on the road 10 months out of the year, its sales value stands out most emphatically during the summer. In this period the roads are best suited to travel and the weather is most ideal for house-to-house canvassing. And since summer months are slowest in store appliance sales, the sales made by the trailer crew help to take up the slack.

IN WINTER, TOO

In winter the trailer is lighted and heated with demonstration appliances and is so comfortable that Mr. Williams says prospects are reluctant to leave it.

The trailer goes on regular trips to various territories, making extensive use of the "use the user" formula, with electric waffle irons offered as premiums for worthwhile prospect tips.

Not stopping with suburban homes, the trailer also makes profitable visits to surrounding small towns and farming communities.

Dealer Arranges Store So That Prospects 'Sell Themselves'

PALESTINE, Tex.—"Let the customers sell themselves"—that's the sales policy of Lawrence Selden, who is both manager and sales force of the new store of Palestine Electric Co., Westinghouse dealership here.

And Mr. Selden makes such a policy possible by the novel way in which he utilizes the new Westinghouse demonstration kitchen which forms the back wall of his salesroom. For the window of this kitchen is also the opening into Mr. Selden's business office, so the kitchen's work surface serves as a counter for all business transactions.

Hence all of the company's time-payment customers, and any other persons having dealings with Mr. Selden, must stand right in the middle of the kitchen while making the necessary transactions, and while there have a splendid opportunity to observe the attractiveness and convenience of the kitchen ensemble.

To tempt them further, Mr. Selden keeps every appliance wired and ready to operate. He points out that it is only natural for customers, waiting for change or standing in conversation at the kitchen window, to flip the switches of the various appliances. So the customers themselves actually start one product demonstration after another.

To further convince his customers of the merits of his merchandise, Mr. Selden keeps the refrigerator in the display kitchen completely stocked with meat, fruit, and ice cubes. "I never have to tell a customer what the merchandise will do," he explains, "because I can always show her."

The kitchen, located in such a way that a person seems to be walking right into it the moment he enters the door of the store, is also visible from the outside through the store's large display windows.

Cooking School Is Aimed To Claim Interest of Prospective Brides

HAGERSTOWN, Md. — Beating Cupid to the punch a bit, Potomac Edison Co. is now conducting "Brides' Classes" in electric cooking in an attempt to create interest in the electric range among local brides-to-be.

Names of prospective brides are obtained from users, friends, employes, and through small advertisements on the society page of a local paper. Home service girls then call on these women, and personally invite them to take the course, which is under the direction of Margaret Ewald, the utility's home service director.

The "students" actually do all the cooking in the four classes which constitute a course. All classes are conducted in the utility's model kitchen, and are limited to six or eight persons each.

When the prospective wives complete the course, they are sent home with their arms full of cook books and promotional literature intended to instill in each of them an unquenchable desire for a range.

G-E Appliance Financing Plan For Farmers Drawn

NEW YORK CITY — Three new appliance financing plans drawn up especially for bona fide farmers who lack sufficient regular income to make monthly payments, and therefore must wait until harvest time to pay off, have been announced to General Electric dealers by General Electric Contracts Corp.

One plan provides for a 25% down payment, with the balance payable in equal amounts at the end of six and eight months.

A four-payment plan requires a down payment of 15%, with one-quarter of the balance due at the end of three, six, nine, and 12 months.

Under the third plan, a $20 down payment is demanded, with the balance payable in eight equal instalments at the end of three, six, nine, 12, 15, 18, 21, and 24 months.

Equipment that may be purchased under these plans includes refrigerators, ranges, water heaters, dishwashers, kitchen waste units, commercial refrigeration equipment, home laundry equipment, and heating and air-conditioning equipment.

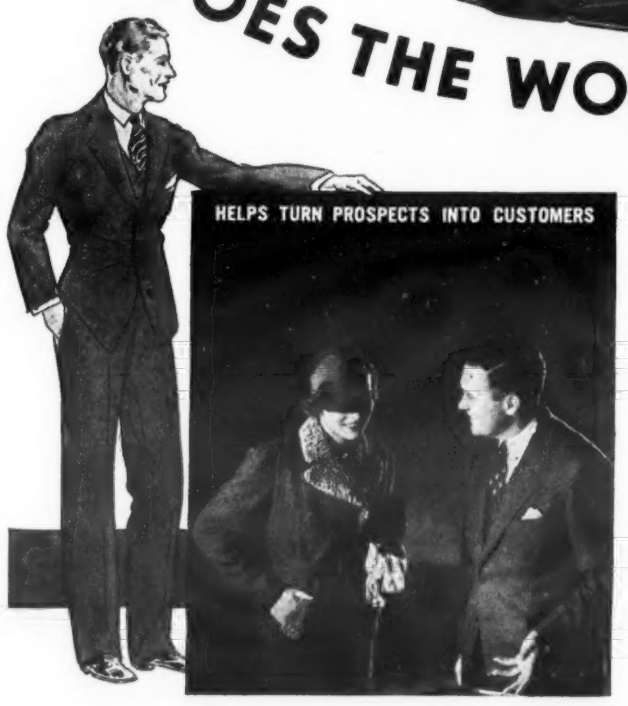
All features of G-E's recently announced customer insurance plan will apply to sales made under these finance terms.

Dealer Modernizes

SUMPTER, N. C.—Home Furniture Co., Kelvinator dealer here, is completely modernizing its place of business.

THIS MOTOR

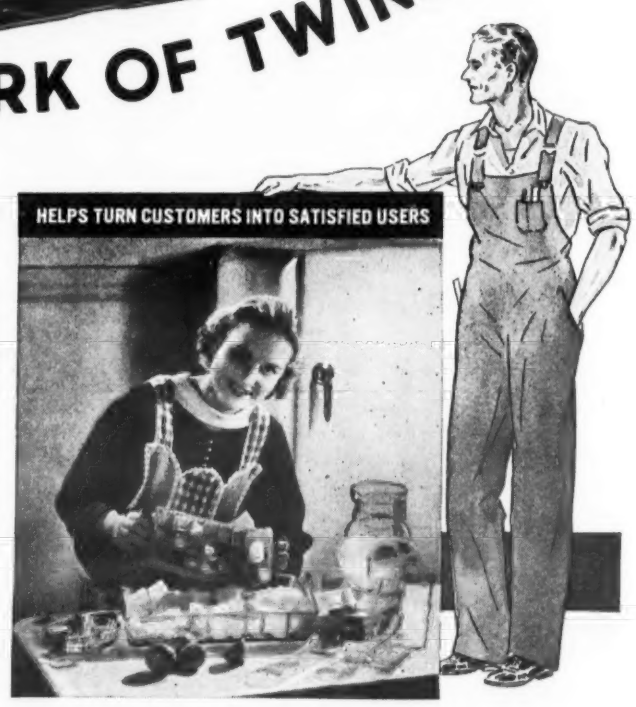
DOES THE WORK OF TWINS



On the Sales Floor

THE motors on your refrigerators are important. Most prospects realize this, but they can judge the quality only by the name of the motor manufacturer. In what better way can you convince your prospects of the high quality of the electric equipment on your refrigerators than by being able to say that it's General Electric?

Such a statement gives a prospect the feeling that your appliances are equipped with the best, and helps to break down sales resistance. Add this electrical advantage to the long list of mechanical advantages, and your sales problem will be mostly terms and delivery.



In the Home

GENERAL ELECTRIC has a background of sixty years in building electric equipment and has built reliable refrigerator motors since the beginning of the refrigerator industry. G-E engineers sit down with the manufacturer of refrigerators and discuss his motor problems, and then build a motor that matches the refrigerator electrically and mechanically.

Today, millions of G-E motors are operating refrigerators, washers, ironers, and similar devices and are giving service that builds confidence in electric appliances. You can be sure that a G-E motor is adequate for its job. General Electric, Schenectady, N. Y.

LET G-E MOTORS HELP YOU SELL

GENERAL ELECTRIC

070-261

Distributor-Dealer Doings

Department Store and Dealer Association Use Trade-In Book

NEW YORK CITY—Herman Hantober, refrigerator appraiser and compiler of the "National Market Index of Trade-In Values for Used Refrigerators," now is promoting use of his book as a guide to trade-in evaluations by refrigeration retailers, especially the refrigeration departments of large department stores.

Namm's department store, Brooklyn, already is advertising trade-in prices based on the "Market Index" figures, and the Essex Electrical League, Newark, N. J., also is encouraging use of the book on trade-in values.

Milwaukee Dealers To Cooperate Again In Annual Food Show

MILWAUKEE — Wisconsin Radio, Refrigeration & Appliance Association will again sponsor a radio and electrical appliance show in connection with the Annual Food Show, to be held in the Milwaukee Auditorium Oct. 17 to 20, it was decided at a recent directors' meeting.

Show committee, appointed by President Frank W. Greusel, is comprised of Bert Johnson, A. Van Antwerpen, and Gordon Fairfield. Present plans are for the association to take over Janeau, Kilbourn, and Walker halls, and conduct the show along lines similar to those of the past several years.

New Form of Retail Sales Setup Tried By Electrolux In Dayton

DAYTON, Ohio—In a reorganization designed to re-establish fair prices and equitable salesmen's commissions in the Servel Electrolux retail trade here, franchises of the six Electrolux dealers operating here have been canceled and Miami Gas Refrigeration Co. has been formed to replace these outlets.

All six of the original dealers were given an opportunity to participate in the new set-up, but only two entered the new company. Others declined for various reasons, some not wanting to lose their identity.

S. M. Thomas, general manager of Tovan Electric Co. here, Electrolux distributor in this territory, has been named president of Miami Gas Refrigeration Co. Other officers of the new firm are: W. D. Rensch, vice president; A. E. Wagner, treasurer; Gordon E. Bloom, secretary and general sales manager.

East Tennessee Electric Expands Facilities

KNOXVILLE, Tenn.—Store space of East Tennessee Electric Co. here has been increased to four times the original size, and a stock of Kelvinator refrigerators, L. & H. ranges and water heaters, washers, ironers, and smaller electrical appliances has been shipped in for display, states R. D. Anderson, dealership owner.

Reason given by Mr. Anderson for the expansion is that business is increasing and will continue to increase when the Tennessee Power System begins supplying Knoxville with TVA current at a lower rate.

New Kelvinator Dealer In Carolina Named

CHERAW, N. C.—Carolina Bantam Co. has been appointed Kelvinator dealer here, and will handle a complete line of electrical appliances.

Employes of Florida Utility Aid Dealers In Summer Campaign

MIAMI, Fla.—Appliance dealers throughout the state are cooperating with Florida Power & Light Co. in a utility-sponsored "Selling Spree" featuring three major and three smaller electrical appliances. The drive began July 29 and will continue until Sept. 28.

Although the Florida area, particularly the southeastern section, is said to have passed the saturation point in electric refrigeration, refrigerators are included among the major appliances in the campaign. The other two are attic fans and automatic water heaters. The three appliances in the "minor" group are electric razors, irons, and cookers.

The utility has converted some 2,000 of its employes into prospect sleuths for this drive. After hunting up prospects for the featured appliances, they turn the names over to a previously designated person in the organization who in turn sees that dealers are advised of these prospects. Any prospect, of course, has the privilege of naming the dealer with whom he prefers to deal.

Numerous prizes will be awarded to dealers, salesmen, and utility employes.

Stewart-Warner Names 11 New Distributors

CHICAGO—Eleven new distributors in seven states have been named by Stewart-Warner Corp. to handle the company's lines of refrigerators, radios, and gas ranges.

Names and locations of these distributors, and the products they are to handle, follow:

Griffith Distributing Corp., Indianapolis (refrigerators, radios, ranges); Ridge Co., South Bend, Ind. (refrigerators, radios); B. J. DeJarnatt, Fresno, Calif. (radios, ranges); W. R. Moore Dry Goods Co., Memphis, Tenn. (radios).

Kaemper & Barrett, San Francisco (radios); Peaslee-Gaulbert Corp., Louisville, Ky. (refrigerators, radios); Hughes-Bozarth-Anderson Co., Oklahoma City, Okla. (refrigerators, radios); Air-Ola Co., Inc., Huntington, W. Va. (radios).

Reitz Sales & Service, Omaha, Neb. (refrigerators, radios); Graybar Electric Co., Los Angeles (radios); Colen-Gruhn Co., Inc., New York City (ranges).

Ft. Wayne Association Re-elects Wegner

FORT WAYNE, Ind. — Ralph Wegner of Hot Point Stores was re-elected president of the Fort Wayne Appliance Dealers' Association, which celebrated its first anniversary Aug. 1.

Other officers, re-elected for the coming year, include William Barth, Barth Co., vice president; Roy Bridges, Indiana Service Corp., secretary; and George Hahn, E. A. Barnes Co., treasurer.

Mr. Wegner, who also is secretary of the National Association of Radio and Appliance Dealers, will soon name committees for the annual convention and appliance show of the association, to be held here next March.

Cooperation between utilities and electrical appliance dealers was the center of attention at last week's meeting, speakers including W. Marshall Dale, vice president and general manager of Indiana Service Corp., and Otto Adams, office manager of City Light & Water Utility.

Loy C. Laney, speech coach at North Side High School, was named parliamentary adviser for the local association.

Little Rock G-E Salesman Wins Trip For Record

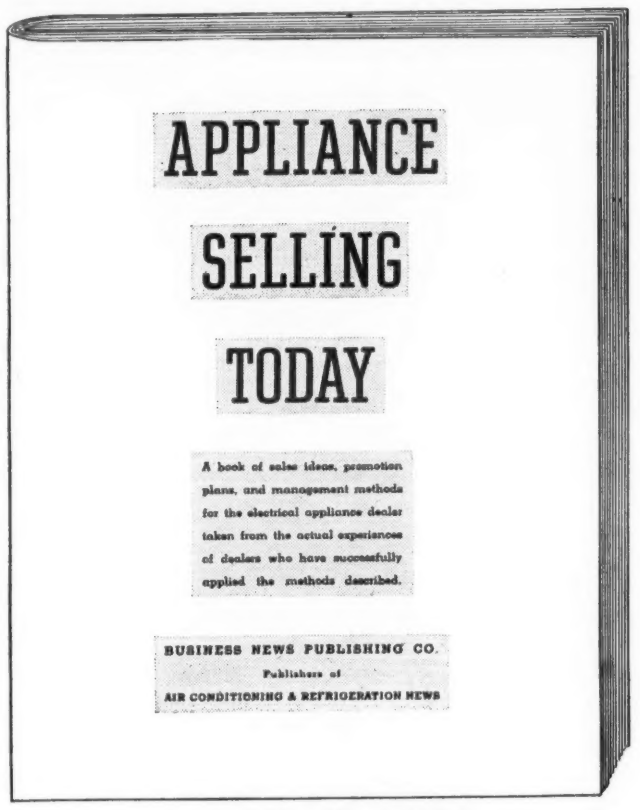
LITTLE ROCK, Ark. — Joe H. Paris, wholesale representative of O'Brannon Bros., General Electric refrigeration distributor here, has been awarded a three-day (Aug. 15-18), all-expense vacation trip to G-E headquarters at Nela Park, Cleveland, in recognition of his outstanding sales performance for the first six months of the year.

R. STEVENSON, V-P and Gen. Mgr., REX COLE, INC., Says:

"Appliance Selling Today is an excellent collection of sales ideas, promotion and operating methods"

"APPLIANCE SELLING TODAY" is a book edited for the appliance distributor, dealer, and salesman who wants to make more sales and more profits. In its 128 pages are written hundreds of sales ideas, promotion methods, and merchandising plans which have been successfully and profitably applied by others all over the country in every-day practice. The ideas described are practical plans which will boost *your* sales average during the coming fall and winter months.

If you are interested in improving the general level of your sales and promotion operations, you will find "APPLIANCE SELLING TODAY" useful. The chapter headings given at the right provide some clues as to the contents of this new book. Methods of getting prospects, paying salesmen, selling electric ranges and all-electric kitchens, conducting sales contests, valuable tips for salesmen, and many more worthwhile and workable sales ideas are included. Read below what others are saying about "APPLIANCE SELLING TODAY," then send *just one dollar* for your copy now. *One added sale alone will pay for this book many times over!*


APPLIANCE
SELLING
TODAY
A book of sales ideas, promotion plans, and management methods for the electrical appliance dealer taken from the actual experiences of dealers who have successfully applied the methods described.
BUSINESS NEWS PUBLISHING CO.
Publishers of
AIR CONDITIONING & REFRIGERATION NEWS

CHAPTER HEADINGS

1. How Some Successful Dealers Operate
2. The Modern Appliance Distributor
3. The Training, Directing, and Payment of Salesmen
4. Selling the Electric Range
5. Selling the All-Electric Kitchen
6. Advertising and Sales Promotion—Ideas and Methods
7. Getting Prospects
8. Methods Used by Successful Salesmen
9. Displays—In and Out of the Store

And an appendix on trade-in schedules, dealer fair-trade codes, dealer operating expense breakdown.

What Others Think of 'Appliance Selling Today'

Let me congratulate those who are responsible for editing and creating, in "Appliance Selling Today," something that offers sound, everyday, plain, workable selling methods. To use today's vernacular, "I think you've got something."

Frank W. Greusel, President, Wisconsin Radio, Refrigeration & Appliance Association, Milwaukee, Wis.

We are indeed pleased with the book "Appliance Selling Today" as was evidenced by the fact that we immediately ordered one more of these for our own use.

This certainly is helpful information, and I intend to show this book to my trade as I call on them.

W. R. Albright, Manager, Electrical Dept., Casper Supply Co., Casper Wyoming

We have gone over the book "Appliance Selling Today" and we are sure that every one of our dealers should have this book and if they would read it, they could and probably would be better merchants.

Harry Frank, Tri State Electric Co., Sioux Falls, S. D.

We liked "Appliance Selling Today" so well that we ordered four additional copies.

Stephen Brown, President, Albany Garage Co., Albany, N. Y.

We know we will get many helpful ideas from reading "Appliance Selling Today."

W. P. Covington, Merchandise Dept., Graybar Electric Co., Jacksonville, Fla.

We have received and read over your booklet—"Appliance Selling Today."

I believe it has been gotten up in a very useful and interesting manner.

R. T. Cragg, Advertising and Sales Promotion, R. Cooper Jr., Inc., Chicago, Ill.

I think "Appliance Selling Today" is excellent. I have been using it with our appliance men.

L. B. Merchant, Merchandise Manager, Graybar Electric Co., Dallas, Texas

The book entitled "Appliance Selling Today" is extremely good, and I want five more copies.

W. D. V. Hopkins, Hopkins Equipment Co., Inc., Atlanta, Ga.

"APPLIANCE SELLING TODAY" will place before you hundreds of new sales ideas pre-tested and found successful by merchandisers like you. Send for this 128 page book today. The cost is only **$1.00**

FREE A copy of "APPLIANCE SELLING TODAY" with a one-year, paid subscription (new or renewal) to AIR CONDITIONING & REFRIGERATION NEWS anywhere in the United States, Canada, Pan-American Postal Union: (For all other countries the price is $6.00.) **$4.00**

BUSINESS NEWS PUBLISHING CO., 5229 Cass Avenue, Detroit, Mich.

Air Conditioning

Report To Medical Association Depicts Value of Conditioning To Humans In Noise Reduction

(Concluded from Page 1, Column 2)

evident by neurosis, loss of sleep, excessive fatigue, emotional disturbances, and the like that jeopardize complete well being."

To show how continued exposure to severe industrial noises leads to deafness, the committee cites investigations showing that of 75 machinists 40% were "definitely hard of hearing," of 40 coppersmiths only 10% had normal hearing, of 100 boilermakers only 9% had normal hearing, many locomotive crewmen are partially deaf, and in drop forge shops poor hearing is so prevalent that workmen regard their deafness as proof of their fitness for that occupation.

Where noise can be excluded, as in office buildings, remarkable improvements in efficiency are noted. Comparisons made before and after noise levels were lowered showed a 12% increased efficiency of office workers, a 42% reduction in errors by a telegraph company, a 29% reduction in errors of typists, while in another investigation employe turnover decreased 47% and absenteeism dropped 37.5%.

"When air conditioning leads to closed windows and doors, and at times double windows and doors, these barriers operate to protect the occupants against as much as 75% of the extraneous noise," the report concludes.

Reversed Cycle System, Electric Air Cleaner, Installed In W. Virginia Appliance Store

PARKERSBURG, W. Va.—Reversed cycle heating and an electrostatic precipitator are important elements in the new air-conditioning system recently completed in the appliance store of the Monongahela West Penn Public Service Co., here.

Installed in accordance with the design and load calculations made by W. B. Hawkins, air-conditioning engineer for the company, the system employs York refrigeration equipment and a Westinghouse precipitator.

Fresh air entering the building passes through the electric air cleaning unit, which consists of a maze of small wires, each charged with direct current. Dust particles in the air are "ironized" by the high voltage. The air then passes through a series of plates charged with the "opposite" current, part of which are grounded. As particles of dust and dirt pass the charged plates, they are repelled and are deposited on the grounded plates.

After passing through the air cleaning mechanism, the air is forced over direct expansion Freon coils, cooled by the refrigeration machine.

During the winter months the store is heated by a "reverse cycle" system. The 10-hp. compressor extracts heat from 52° well water, which is cooled to 33° F. Air forced over the condenser, which contains hot refrigerant gas, is returned to the store and used to heat the building. In this instance the heating requirements of the store do not exceed the capacity of the compressor to extract heat from the well water.

York's New Residential Conditioners Show Trend To 'Packaging' of Equipment

YORK, Pa.—Completing the line of residential air-conditioning equipment announced early this year, the York Ice Machinery Corp. has recently introduced a new oil-fired winter conditioner, a gas-fired furnace, a residential summer conditioner, and a "split-system" air conditioner, the latter for use with the company's gas-fired and oil-fired boilers.

The summer air conditioner for residential use is built in three models, corresponding to the three sizes of unitary self-contained store conditioners brought out at the first of this year. Equipped with 2, 3, and 5-hp. motors, the units cover a wide range of summer cooling requirements when installed with ductwork.

Built in capacities from 110,000 B.t.u. to 350,000 B.t.u. hourly, the York oil-fired winter conditioners are equipped with a pressure atomizing burner, which is said to have a special low-capacity adapter for small firing rates. Heat transfer in the furnace is by means of a series of 1¼-in. steel tubes, having a spiral finned surface. Units are complete with filters, humidifiers, and necessary controls.

The Yorkaire "split" system conditioner is built in three models, with a B.t.u. transfer of from 70,000 to 156,000 per hour, depending on water temperatures in the heat exchanger. Fan capacities of the unit are 1,000, 1,500, 1,750, and 2,000 c.f.m. A special diffuser type humidifier is built into the unit, and cooling coils may be placed in the air stream. Conditioners are shipped with heat transfer surface, motor, pulleys, belt, air filters, aquastat, humidifier, and water filter. Casings are York luminescent gray.

Gas-fired winter conditioning units are built in nine models, from 87,000 to 375,000 B.t.u. input per hour. Heat exhange units are cast iron, and cast-iron drilled-port burners are used. The furnaces are supplied with humidifier, blower, motor, drive, Dustop air filters, galvanized inner casing, draft hood, all gas controls, and a Minneapolis-Honeywell room thermostat.

S. S. Mauretania Conditioned With Carrier Equipment

BIRKENHEAD, England—Air conditioning went to sea on another Cunard White Star liner on July 28, when the new Mauretania, 33,000-ton successor to the famous old Cunard record-breaker of the same name, slid down the ways here, across the Mersey river from Liverpool, England.

The cabin dining saloon, cabin lounge, tourist lounge, and the tourist cinema are completely air conditioned. Carrier air-conditioning equipment and Carrier water distributing systems are being used aboard the liner.

Similar equipment was installed on the Queen Mary, and Carrier will supply the air-conditioning system for the new monster ship, Queen Elizabeth.

Oil Burner Dealers In Milwaukee Organize

MILWAUKEE — The Oil Burner Contractors' Association has been organized to handle problems connected with installation and servicing of oil burners in the Milwaukee district.

Officers are A. K. Perego, president; Grover C. Fillbach, vice president; E. R. Benson, secretary-treasurer; and Allen Pflugradt and S. H. Gregg, directors.

George Worthington Named Dealer For Carrier

CLEVELAND—George Worthington Co., 802 St. Clair Ave., has been named dealer in Carrier portable air conditioners. A. C. Boltz is in charge of the new department.

A.S.H.V.E. Committee Will Clarify Conditioning Ideas For Public

NEW YORK CITY—An industry-wide Committee on Public Relations has been named by E. Holt Gurney, president of the American Society of Heating and Ventilating Engineers, to clarify the public conception of air conditioning and define the service which users can expect from various types of systems.

Drawn from the major branches of the industry representing engineers, consumers, utilities, manufacturers, and installers, the committee will develop an educational program designed to enlighten both the public and commercial users of air-conditioning systems, hoping thus to combat any misleading claims.

Attention will also be directed to bringing about a better understanding of correct temperatures and humidities to be maintained in air-conditioned spaces in summer for health and comfort and to proper operation of air-conditioning systems in stores, theaters, and public buildings.

J. M. Frank, president, Ilg Electric Ventilating Co., Chicago, is chairman of the new committee which includes Willis H. Carrier, chairman of the board, Carrier Corp.; Charles K. Foster, vice president, American Radiator Co.; L. C. Harvey, vice president, Bryant Heater Co.; E. W. Lloyd, vice president, Commonwealth Edison Co., of Chicago; J. O. Ross, president, Auditorium Conditioning Corp.; H. M. Hart, president, L. H. Prentice Co., Chicago; and E. D. Harrington, research engineer, General Electric Co.

Cement Co. Conditioned To Cut Noise, Dust

BIRMINGHAM, Ala.—Desirability of shutting out external noises and eliminating air contamination was a moving factor in the recent air conditioning of the office building of the Universal Atlas Cement Co., U. S. Steel subsidiary at Leeds, Ala.

The two-story office building is continguous to plant operations with the usual noise incident to rock crushing and cement making. The manufacturing operations also raise smoke, dust, and fumes.

The 25-ton direct expansion Carrier system allows the concern to keep the windows and doors closed, yet the employes are kept cool and comfortable in the summer time. It is an all-year around system, heat being supplied in winter by a gas-fired steam boiler.

Intake air is passed through continuous-type oil-coated filters as an aid in eliminating dust from the cement kilns and from trucks loading and unloading. Building insulation consists of 4 inches of glass wool in the attic and 1 inch of cork on the first floor. The furred-in ductwork is also insulated with cork.

Shook & Fletcher Supply Co., Birmingham, made the installation with J. J. Keith and R. P. Quinn, engineers on the job.

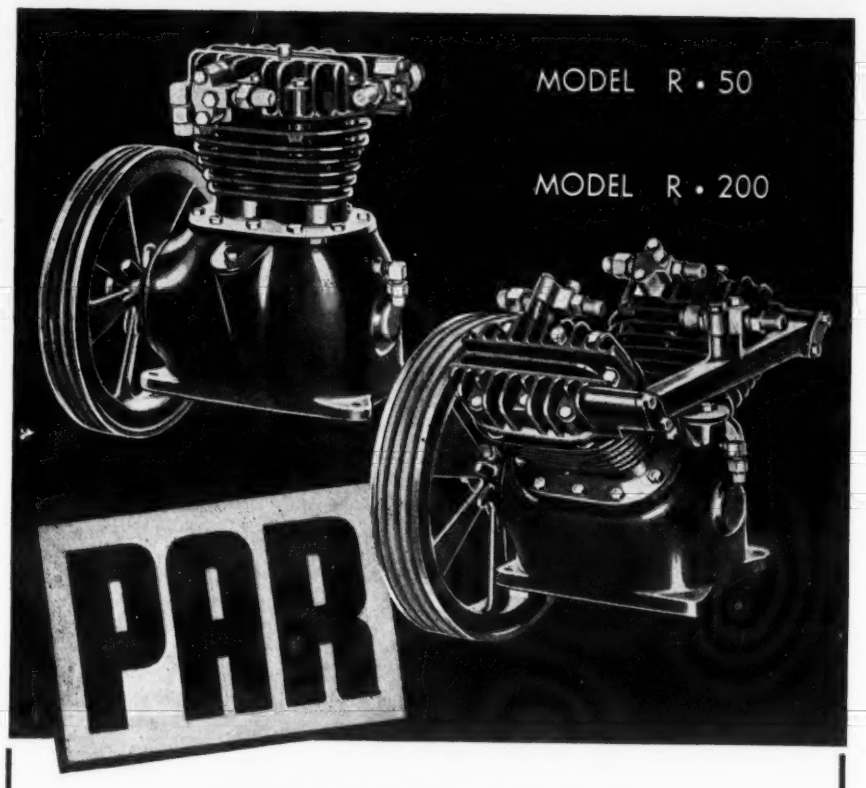
Airtemp Produces New Film To Aid Dealer Drive

DAYTON, Ohio—Prevue of "Line Up for Today's Business," a 15-minute sound sales film prepared for Airtemp, Inc. by Caravel Film Productions, New York City, was held recently at the Airtemp factory here for the benefit of company officials.

Twenty copies of this film are being made for distribution to all direct factory representatives, who also are being equipped with projectors and complete sound equipment for showing the film. Each representative then will make the film available to distributors in his territory to aid them in their attempts to line up suitable dealers.

The film was produced expressly for the purpose of putting across the Airtemp story to dealers more effectively, and if it proves successful it may be followed by other productions of a similar nature, company officials indicate.

Additional copies of the original film are expected to be ready for distribution about Aug. 18.



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Buffalo, New York Root, Neal & Co.
Charleston, W. Virginia Air Conditioning & Refrigeration Sup., Inc.
Chicago, Illinois H. W. Blythe Co.
Cincinnati, Ohio Merkel Brothers
Cleveland, Ohio Debes & Co.
Columbus, Ohio Hughes-Peters Co.
Dallas, Texas The Electromotive Corp.
Davenport, Iowa Republic Electric Co.
Dayton, Ohio W. H. Kiefaber Co.
Denver, Colorado Refrigeration Parts and Supply Co.
Detroit, Michigan W. C. DuComb Co., Inc.
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Tampa, Florida Bowen Refrigeration Supplies Co.
Toledo, Ohio Heat and Power Engineering Co.
Tulsa, Oklahoma Machine Tool & Supply Co.
Washington, D. C. Melchior, Armstrong, Dessau Co.
Waterloo, Iowa Winterbottom Supply Co.
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Winnipeg, Man., Canada Railway & Engineering Specialties, Ltd.

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Locker Storages

Pennsylvania Plant May Add 500 More Lockers

LANCASTER, Pa.—A food storage locker plant of 500-locker capacity is operated by the Lancaster Ice Mfg. Co. in connection with its ice plant and apple storage plant here.

Four Frick compressors carry the entire cooling load; the sizes are 10 x 8, 8 x 8, 7 x 7, and 5 x 5. Except under extreme conditions, the 7 x 7 machine is seldom operated.

Capacity of the ice plant itself is 65 tons per day, and 36,000 bushels of apples are stored in an average season.

All of the plant's 500 food lockers are in use, the company reports, and at present plans are being made to equip another room with 504 more lockers. Temperature of the freezer room is kept between 0 and —8° F.

Apple storage space is located in another building, which is equipped with a conveyor-type elevator for use in raising and lowering the fruit from one floor to another.

Users of Tennessee Plant Report Gains In Poultry Profits

GALLATIN, Tenn.—Residents of Sumner county who use the locker refrigeration plant installed here last November express complete satisfaction with the storage idea and report considerable savings in poultry, according to J. C. Snow, University of Tennessee extension meat specialist, who recently inspected the plant.

More than 2 tons of poultry has been stored in the loeker plant since its opening, Mr. Snow declared. Chickens are killed when they attain the best weight and condition for frying, and are stored in the locker plant to supply a future market.

One locker renter, who has stored 50 fryers in her locker, told Mr. Snow that she can save the $10 annual rental several times over by selling the poultry for higher prices.

Another locker renter stores guineas in his locker, while others store roosters and turkey "toms," keeping them until they bring better prices, and saving on feed.

Sharp freezing of the poultry at —10° F. improves the quality by breaking down tough fibers, Mr. Snow stated.

Rempe Folder Gives Data On Locker Plant Systems

CHICAGO—A special folder giving concise information about locker storage plants has been released by Rempe Co., refrigeration coil manufacturer.

Illustrated with photographs of the chill room, sharp freeze room, and locker room of a typical locker plant, the folder describes the component parts of the building, gives average sizes of lockers, and states the general purpose of a locker plant.

Rempe coils for locker plants also are described in the folder.

Plans For Plant Started In Bowling Green, Ohio

BOWLING GREEN, Ohio—Cold Storage Lockers and Market Service, Inc., has been organized here to construct a warehouse and lockers to be rented to patrons for storage of foodstuffs of perishable nature. Members of the firm are R. M. Fudge, M. E. Dunipace, and Lelan S. Middleton.

VIRGINIA SMELTING COMPANY
WEST NORFOLK, VIRGINIA

Experiments With Frozen Poultry Indicate Advantages of 'Conduction Freezing' Method

STATE COLLEGE, Pa.—Advantages of the "freezing by conduction" methods used in the newer "quick freezing" processes over the older air blast methods of freezing poultry were explained by Van R. H. Greene, New York City consulting engineer, in his talk on "Quick Freezing of Poultry," made before the recent Food Preservation Conference here.

Mr. Greene described each of the various methods, and explained how tests had indicated the advantages of the freezing-by-conduction methods.

It was also brought out by Mr. Greene, in a discussion from the floor following the talk, that the birds should be frozen while they are still "hot"; that pre-cooling does not speed up the time that it takes to do the freezing job, and that pre-cooling causes a "crusting" of the surface of the bird that may actually retard freezing time.

Of the eight hundred million pounds of dressed poultry handled in this country today, the greater part is frozen in a more or less degree, Mr. Greene declared.

'DRESSED BOX PACK'

In the so-called New York Dressed Box Pack, wherein the entrails are left intact, the general practice is to hang the chickens, after they have been killed and plucked, in a cold storage room at a temperature of around 35° F. for 24 hours. This enables the normal heat to be removed and the body to become sufficiently stiffened to enable it to be readily packed in a box of 12 birds.

This is called a hard chill and is not always carried to completion—sometimes it is used to establish a hard crust leaving the entrails soft.

This package is then stored in a commercial cold storage freezer at around a temperature of 0° F. until solidly frozen, and finally sold. Approximately four days are consumed in freezing this box solid. When this box so frozen is received by the local butcher, it is usually defrosted and handled by the butcher as fresh killed birds.

FOR DRESSED POULTRY

The same procedure, except for the element of time, is followed with New York dressed poultry, quick frozen by an air blast system, and with such a system the time for freezing can, of course, be greatly reduced below that required for still air freezing, but the procedure for other methods of quick freezing is quite different, said Mr. Greene.

There are at the present time three different methods used which are intended to produce the quick freezing effect. One of these is the air-blast system, in which the birds ready to be frozen are either placed in a room through which air is circulated at high velocity, or they are conveyed in a tunnel against a strong blast of air. Air for freezing in this manner is usually kept at a temperature in the neighborhood of —40° F., and considerable care must be taken to avoid the damaging effects of freezer burn and dehydration.

Another method is the Birdseye system, which process consists of freezing packaged products under controlled pressure between two refrigerated flat metal surfaces, such as belts or plates. The belt type of equipment is used where permanent installations are necessary although, to a large extent, this belt type machine is being replaced by the plate type froster.

MULTI-PLATE FREEZER

As the name implies, the multi-plate froster consists of a series of refrigerated plates, arranged one above the other in such a manner that they may be moved apart to receive products between them and then closed with any desired degree of evenly distributed pressure. Normally, they are held apart with an opening between them somewhat greater than the thickness of the package to be frozen and are raised and lowered by means of a hydraulic piston connected to the lower plate.

These plates are made of rolled aluminum alloy with sinuous passages through which is circulated the refrigerant, which may be brine, ammonia, or other type.

A third method is the Z Process. While in outward appearance the Z Process equipment differs considerably from the Birdseye system, they actually have inherent points of similarity. In the Birdseye equipment, the refrigerant is brought in intimate contact with the produce through means of metal, while in the Z Process, the refrigerating effect is conveyed through the means of finely atomized salt brine.

This type of freezer consists of an insulated tunnel through which the product is carried on a wire mesh belt. This particular type of equipment is especially suitable for handling a uniform product whose freezing period is relatively short. Therefore, it is suitable for quick freezing loose shrimp which requires but 10 minutes for complete solidification; likewise it is practical for handling fish fillets or for any large scale production such as chickens, which usually require one hour for complete freezing.

AIR FREEZING REPLACED

The basic idea, therefore, of modern quick freezing apparatus is to replace air freezing, which we all know is a very bad heat conductor, by surface conduction, Mr. Greene explained.

According to Mr. Greene, the eviscerated pack is slowly but surely coming to the front as a packaged form of merchandise, but it represents more commercial difficulties in the handling than does the New York dressed pack. The decomposition of the entrails of a fowl does not necessarily produce harmful bacteria but does produce destructive bacteria which seriously impairs the flavor and odor of the animal.

On the other hand, the opening of the abdomen to the outside air of the eviscerated product opens the way for the development of harmful bacteria which multiply rapidly unless the product is quickly frozen and far more care must be exercised in the handling of birds in this way, he said.

Tests would indicate that the decomposition of the entrails of a chicken begins with death and is progressive thereafter. At eight to 10 hours it has progressed to such a degree that resulting off-flavors in the meat are readily detected by the average person.

QUICK-FREEZING ADVANTAGES

In connection with the freezing of eviscerated poultry, it will be well to note the following points:

1. For the first few days after storage little difference appears between quick frozen and air frozen samples. However, with increased length of storage the superiority of quick frozen samples becames apparent. Air frozen samples showed pronounced darkening of the abdominal fat. Cavity odors became strong and indicated protein decomposition.

2. Putrefaction started much more quickly in the air frozen samples, beginning as early as the third day, while quick freezing showed no odors described as strong at any time during tests.

3. Unlike many products, the flesh of healthy poultry is comparatively sterile and the presence of bacteria in any great quantity in the intestinal cavity indicates an unusual condition. Development of odors in the skin is due to chemical and bacterial action.

4. Tests of the cavity show rapid bacterial increases beginning on the fifth and sixth day after thawing. The occurrence of strong cavity odors and strong flavor in the meat of air-frozen chickens, even though the bacterial count is not excessively high, indicates the development of bacteria in all air-frozen samples.

5. The slower air freeze, with the consequent rupture of the cell walls by the action of large size ice crystals, allows the cell juices to escape into the flesh. This is one of the important facts brought out by these tests and shows results in accordance with previous accepted theories with regard to quick and slow freezing of protein products.

PROCEEDS UNIFORMLY

Freezing curves for undrawn poultry show that for a period of nine hours the air-frozen bird kept a constant temperature of 30° F., showing in a striking way the separating out and crystal freezing of practically clear water with the production of large ice masses, characteristic of cell freezing.

On the curve for frozen birds there is practically no flat section on the temperature curve. Freezing proceeded uniformly anywhere from the outer surface to the center without pausing. Hence the crystals are small and the juices of the flesh only slightly broken up and separated by the freezing process.

JUICES INTO ICE

Under the conditions of slow freezing, juices of the flesh, which are colloidal mixtures of salt and sugar, separate into practically clear ice and concentrated solutions, said Mr. Greene.

In quick freezing the reduction in temperature is accomplished at so fast a rate as to permit of insufficient time for the water to separate out. Hence, the juices freeze practically in their natural state. Being concentrated, they freeze at lower temperatures and by freezing quickly form minute crystals instead of large crystals.

Slow frozen crystals, being mostly separate water, freeze and conversely thaw at 32° F., whereas quick-frozen crystals, being in the form of a colloidal jell, freeze at the freezing point of the poultry which experiments indicate is below the freezing point of water.

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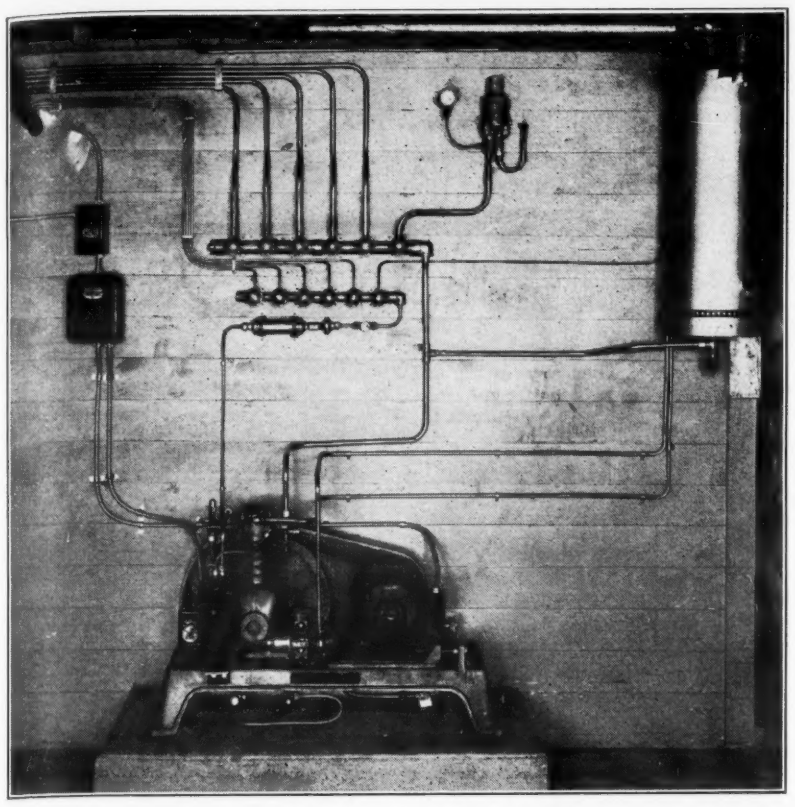
Installation Methods

Work of a Refrigeration Craftsman



The above installation for a food and beverage-cooling system, made by the Thorne Refrigeration Service Co. of Winona, Wis., was selected by H. W. Small, Minneapolis parts jobber, as one of the neatest-appearing jobs he has ever seen. Story about it is told below.

• • •

Pride In Their Work Demonstrated By Pictures Which Service Men Submit To Jobber H. W. Small

Thermal Co., Inc.,
Wholesale Distributors
Supplies, Controls, Parts For
Refrigeration and Air Conditioning
2434 University Place
St. Paul, Minn.

Editor:

Several weeks ago we conducted a Tube Bending Contest to which you gave publicity in AIR CONDITIONING & REFRIGERATION NEWS. The subsequent interest has caused a number of firms to write us describing their work and in many cases, enclosing a picture. We think that of the various photographs received, the one which we are sending shows about as neat an installation as we have seen.

The installation is the work of the Thorne Refrigeration Service at Winona, Minn. It demonstrates that neatness need not be expensive. The installer is justly proud of his work and we are sending this to you as an example of what publicity does to create pride in the contractor.

Perhaps some of your readers have similar jobs that are equally neat. We submit this to you as a concrete example of what your publicity has done to create pride of work among those who are actually making the installations.

H. W. SMALL,
President

Editor's Note: We are pleased to publish the picture of the fine installation made by the Thorne Service Co., and we hope that other service engineers who take pride in their work will submit photographs of their work which they consider particularly good.

From L. E. Thorne of the service concern we obtained the following description of the installation pictured above:

"This installation was installed in the Eagles Club of Winona. Following is the list of the equipment:

"One 8½ x 12 x 7½-ft. walk-in cooler, cooled with a No. 62 Peerless chilling unit.

"One 12-lb. finned ice maker in a back bar cooling 12-cu. ft. space for dry bottle cooling.

"Two 25 B2W Temprites for beverage cooling.

"Two 18 x 36-inch sweet water bath bottle coolers.

"One FE3WM Mills condensing unit equipped with 110-220 volt motor and an oil separator.

"One 18-gallon surge tank.

"One snap-action valve for walk-in cooler.

"One 5-valve, ⅝-inch suction manifold.

"One 5-valve ¼-inch liquid manifold.

"One liquid line strainer.

"One liquid sight gauge.

"One dryer.

"One 220-volt double pole magnetic switch.

"Soft copper tubing in ⅝-inch and ¼-inch sizes is used, bends being made with suitable tube benders.

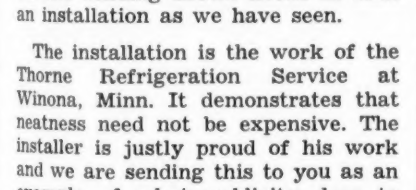
"The low-pressure control is set for the coldest, or lowest temperature unit, which is the ice maker. The Temprite coolers are equipped with their own constant pressure valves.

"The two sweet bath bottle coolers have Fedders constant pressure valves for maintaining temperatures. Plenty of coiling is used to maintain 34° F. without getting formation of ice.

"Since Freon-12 refrigerant is used it is quite necessary to use the oil trap.

"The surge tank is used to prevent short cycling which might be caused by the operation of the beverage cooler.

"Incidentally, the pressure gauge that is shown attached to the snap-action valve was used to set the cut-out and cut-in point for the walk-in chilling unit. This gauge has since been removed and would not have appeared had the photographer not been so anxious to get the picture."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Kerotest Manufacturing Co.
Pittsburgh, Pa.

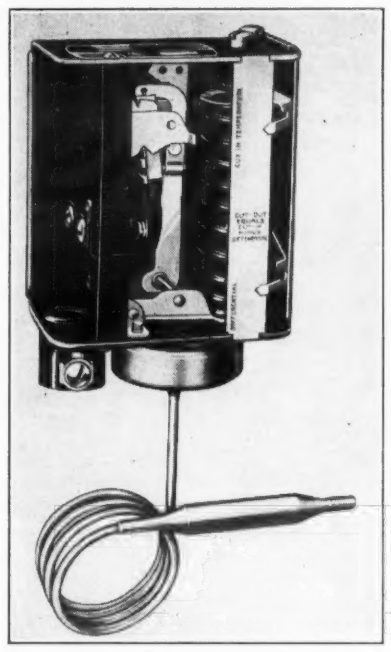
All-Purpose Commercial Control With Wide Range Introduced By Ranco

(Concluded from Page 1, Column 2)

the contacts, may be used with motor overload protection on motors up to ¾ hp., 115-230 volts d.c., it is said. The BX clamp which is integral with the case, and the large, fully exposed chamber, makes for easy wiring.

In bringing out this control, the company says, aim has been to produce an all-purpose commercial unit of wide range and high capacity which could be sold at a moderate price. Type "G" control is offered for all commercial applications within its power range, including beverage coolers, milk coolers, ice cream cabinets, walk-in coolers, display cases, banana ripening rooms, film development tanks, and for air conditioning and magnetic valve control.

Just Out



Side view of the Ranco temperature control, shown without mounting brackets and with cover removed.

The unit has a heavy black enamel pressed steel case with two adjustable mounting brackets, and may be mounted in any position. The snap lock covering exposes two sides when removed, making the large electrical binding post connections and the calibration indicators for both range and differential adjustments completely visible and easily accessible.

Control has a low differential, with positive pressure wide break contact switch mechanism. Toggle mechanism and the springs are made of rustproof stainless steel. Extra-large fine silver contacts are claimed to give unusual current capacity and long life.

Range and differential adjustments are regulated by adjustment screws at the top of the unit. Directional arrows are stamped in the case, to show direction of rotation of these screws.

For ice cream cabinet use, the control is furnished with an additional pilot circuit contact, Pilot circuit closes 4° higher than the cut-in temperature setting. The contacts may be connected in a one-ampere circuit to flash a signal or ring a bell, warning the operator that the machine has not started at the proper temperature. Signal flashes when any shut-down occurs, except in the case of current failure, and prevents loss by spoilage of ice cream by giving warning in ample time.

Bradford, Pa. Cafe Cooled

BRADFORD, Pa.—F. C. Patterson & Co., Inc., installed Carrier air conditioning in the Galanis restaurant, which reopened at 121 Main St. here after extensive remodeling as Bradford's only air-conditioned restaurant.

Developed Control

E. C. RANEY
Head of Ranco, Inc., he developed the new control for commercial refrigeration applications.

Harten & Knodel Acquire 'Cool Wave' Franchise

DAYTON, Ohio—The Harten & Knodel Distributing Co. has been named local distributor of Philco Cool Wave room air conditioners for this territory. David Pickrel is in charge of sales at the Dayton branch. The company also handles Norge air-conditioning units.

The firm has relinquished its Carrier franchise.

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Silent, vibrationless, dependable, long-lasting. Powerful grip prevents slippage. A nearby distributor carries a complete stock for appliances and machines.
THE DAYTON RUBBER MFG. CO., DAYTON, OHIO
World's Largest Manufacturer of V-Belts

Anaconda Copper
Refrigeration Tubes
Smooth as ice inside!
ANACONDA
THE AMERICAN BRASS CO.
FRENCH SMALL TUBE BRANCH
General Offices: Waterbury, Conn.

BUNDY TUBING
Uniformity of wall-thickness is an important quality
BUNDY TUBING CO.
DETROIT

AIR CONDITIONING & REFRIGERATION NEWS

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The Trader vs. Planned Economy

LEFT-WINGERS have a most childish way of answering the arguments of those who oppose or dispute with them. They simply call any or all opponents "economic royalists," or "capitalistic tools."

The writer of this editorial is neither an "economic royalist" nor a "tool of the capitalists." He opposes the collectivist philosophy which underlies the New Deal because he is a student of history. What does history teach?

In general, those nations which have allowed free initiative to the trader have enjoyed peace, prosperity, and freedom. Those nations which have allowed politicians to gain the ascendancy have known poverty, serfdom, and war.

To develop this thesis even in outline would require a lengthy book; but most readers of this editorial can recall example after example from their own historical readings. On the side of freedom and prosperity: the Phoenicians, the Greeks, the Romans, the Italian city-states such as Venice; and, in our own times, England, France, The Netherlands, the Scandinavian countries, and the United States of America.

The histories of France and England present most complete records of the identification of national progress with the freedom of the trader. How the emergence of the merchants from the controlled economy of the feudal states brought prosperity and world dominance to these two democracies is a most fascinating picture of human achievement.

And in the United States we have witnessed a unique phase of this chapter in history. An immigrant nation, it was populated predominantly by the middle classes of Europe, in whom the principles of free enterprise were strongly implanted. America presents the spectacle of a nation into whose very structure the ideals of free enterprise are incorporated. Under the benign influence of these principles a free people built, during the short space of a century and a half, a nation unparalleled from the standpoint of prosperity and individual freedom.

Collectivist States Can Be Observed In Operation

On the other side of the fence, one can point to the totalitarian states now in existence: Germany, Italy, and Russia, in which freedom is merely a blunted memory, prosperity an impossible longing, and war an imminent inevitability. It is no longer necessary to argue theory with Communists or Socialists. The example of *what actually happens* in a collectivist state is revealed before our eyes today.

Controlled economy means controlled living. The planners must work their plan. Hence there can be no dissent. Freedom of action, freedom of speech, freedom of thought, freedom of religion, freedom of science, freedom of education must be crushed—everything must work toward the success of the plan. The end, they say, justifies the means.

And what is this sacred "end" for which the collectivists would have us give up our precious heritage of freedom? They answer: economic betterment for the masses. Control of wealth, they say, must pass from individuals to the state.

But the state, we reply, is no holy abstraction. Government is just a group of men. In changing from capitalism to collectivism, title to the nation's wealth and resources merely shifts from one oligarchy to another. Turning control of capital over to the state *intensifies that control,* and decreases the number of men in control. Instead of dollars, political power becomes the new symbol of wealth. And if anybody doubts that each variety of oligarchy enjoys the same perquisites, he need only observe how the rulers of collectivist states live.

You can change the system but you can't change human nature.

Chance for Everybody Under Capitalism

In a competitive capitalistic society, every man has a chance to gain wealth and power—and thousands do. Furthermore, history teaches that while the individual entrepeneur of great talent may gain more wealth, living standards for the masses become higher, too. This, *plus freedom.* In a free society, everybody has a chance at gaining wealth; under the superstate, only the self-perpetuating ruling caste can attain luxury. And in a free society, the "masses" live better than they do under a superstate.

The story of progressive civilization is an account of the rise of nations which allowed the business man, the trader, the individual, freedom to go about his work. And in the wake of the trader have followed culture, education, and development of the arts and sciences.

The Trader Learns Tolerance

This is no formula handed down from on high; it's a relatively simple matter to explain. The trader learns *tolerance.* He sees all types and manner of people. He learns what they want, what they need for better living, and endeavors to give it to them. Thus he encourages scientific investigation, he subsidizes art. And both *freedom of individual action* and *peace* are necessary to the development of his business. Hence the standard of living of the entire populace improves apace with the success of the trader.

Peace is essential to the trader in order that the interchange of commodities may proceed unhampered. It is also essential to the establishment of stable currencies, prices, and values. What's more, war diverts income from trading channels into the enormously unproductive — and destructive — expenditures for military campaigns; and diverts inventive minds from the vocation of improving man's manner of living to the ghastly business of mass destruction.

Individual Freedom Essential to Commerce

Individual freedom is also greatly desired by the trader—not only for himself, but for his customers. Unless the individual is free to aim at the highest possible position in a peaceful society, a progression of living standards cannot be achieved.

Men must have freedom of opinion, too, with no fear that their speech or thoughts or actions may cause retaliation by their government. They must have freedom of motion, so that they can seek the best opportunities open to them. They must have freedom of social intercourse, so that no false social standards may impede them in their efforts to achieve a higher position. All these things are essential to commerce.

Because the trader has of necessity sponsored peace and freedom wherever he has been in the ascendancy, the prosperity that peace and freedom invariably bring has rewarded the nations which put their trust in business men rather than in dictators and warlords.

Under collectivist control, however, the individual becomes entirely subservient to the state. That means he becomes subservient to the rulers. And the chief end in view of rulers (the history of all such states affirms this) is to keep their power. What do the masses get out of this? Again history answers: enslavement, poverty, and inevitable war.

Proponents of planned economy and the collectivist (or totalitarian) state must presuppose rulers who are both supermen and benevolent. It is possible that rulers can operate benevolently; there have been many such examples. *But not in succession.* For every Augustus there are three Neros. Benevolence seems invariably followed by tyranny.

And supermen? Try and find them today. Our modern technological civilization has become so vastly complex that no individual or group of individuals can grasp the infinite details of knowledge necessary to intelligent control of its activities. The pitiful, if earnest, attempts of the NRA administrators to *understand* (let alone, direct) the great provinces of industry assigned to them is a painful memory to all who were familiar with that recent phenomenon.

Simplification Means Lower Living Standards

By hypothesis, the modern dictator must *simplify* in order to control and direct. Simplification means reducing the number of things we can have and enjoy and do—or, put another way, lowering the standard of living. This has been borne out in the Germany, Italy, and Russia of today.

The unparalleled standards of living which have characterized the Twentieth Century have come about through the diversification of industry, and the increasing division of labor. (Incidentally, the division of labor was one fundamental concept of industrial civilization which Karl Marx, as shown in his writings, never comprehended.)

Collectivists, as we have said, must simplify. There must be less diversification in order for them to control and direct. So far, the only method they have found of enforcing simplification of their people's activities is to regiment, or militarize, the nation. The entire body politic becomes an army, under strict army discipline.

By simplification, by turning backward the tides of progress through diversification and division of labor, they impoverish the people. Thus, there is only one method open to them for gaining wealth for the nation: war. They must take wealth from another people.

America was founded by men and women who wished to escape from the tyranny of authoritarian states. They came to this new land so that they could worship as they pleased, think as they pleased, and do business without governmental interference.

America fought for, and won, its independence because its citizens revolted against the oppressive taxation which is a concomitant of the authoritarian state. And America became the greatest nation on earth, with the highest standards of living in the world's history, because its traders, its business men, were allowed freedom to develop the country and its resources, and to put science and industry to work in behalf of the people.

Collectivist State Is An Anachronism

The authoritarian collectivist state is an anachronism. It has no place in a modern industrial civilization. If allowed free rein, the collectivists in the end are bound to wreck the civilization we have attained. And Americans, of all people, should resist state encroachment upon individual liberty with all their might and main.

Americans do not need to study world history in order to make up their minds about planned economy. They have seen how liberty and competitive capitalism have made their nation free and great. In falling for the oleaginous blandishments of the glib New Dealers they are rejecting the fundamental principles which have made America the envy of the world.

In summation we can only repeat the original thesis: those nations which have granted the trader the right of free initiative have enjoyed prosperity, freedom, and peace; whereas the nations which have allowed politicians to gain control have suffered poverty, serfdom, and war.

Which do YOU want?

They'll Do It Every Time . . . By Jimmy Hatlo

SAY, ALVIN - THE BOYS ARE GOING TO TRY OUT THAT NEW BAR THEY OPENED DOWN THE STREET. WANT TO COME ALONG?
NO-NO - IT'LL TAKE ME AT LEAST ANOTHER HOUR TO CLEAN UP THE WORK I'VE GOT HERE, ELMER - YOU KNOW I DON'T WATCH THE CLOCK LIKE SOME PEOPLE AROUND HERE
WELL, THERE HE GOES - PUTTING ON THE OLD BUSY ACT AGAIN AND TRYING TO SHOW US UP
YEH - I NOTICE HE GETS OUT OF HERE LIKE A FIRE HORSE ANSWERING AN ALARM - WHENEVER THE OLD MAN'S OUT OF TOWN
BUSY - BALONEY! THAT'S JUST A LOT OF BLANK PAPER HE'S GOT SCATTERED ALL OVER HIS DESK
SURE - HE'LL SIT THERE TILL THE BOSS GOES HOME AND THEN WATCH HIM TAKE IT ON THE LAM
CHATTING ABOUT THE GUY WHO PUTS ON THE AFTER-HOURS BUSY ACT FOR THE BENEFIT OF THE BOSS — EVERY OFFICE HAS ONE OF THESE ANIMALS AND — THEY'LL DO IT EVERY TIME THANX TO L.S.EVERETT -
JIMMY HATLO
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Specialty Selling Methods

'If You Want To Build Up Appliance Sales, Go After the Service Business,' Says Dealer Who Offers an All-Inclusive Guarantee

OAKLAND, Calif.—"If you want to build up appliance sales, put in a complete service department and really go after the service business." So says F. Bersano, partner in the Oakland Appliance Co., one of this city's best-known and most successful independent appliance stores.

Mr. Bersano traces better than 25% of his total appliance business directly to the service department. And what's more, the service department has proved directly profitable.

A former service department employe of the old Maytag store here, which he and his partner later bought out and converted into the Oakland Appliance Co., Mr. Bersano realized the importance of a service department in the scheme of appliance merchandising. Right from the start, he featured service.

COMPLETE GUARANTEE

One particularly important aspect of his service department set-up is the complete guarantee which it makes possible. This store's one-year guarantee on appliances includes not only the parts—which are covered by the factory—but also labor. If anything goes wrong during the guarantee period, the customer can be assured that it will be taken care of without any charge whatsoever. Naturally, that's a big selling point.

That one-year guarantee applies to trade-ins as well as to new merchandise; the store guarantee on used appliances fully covers both labor and parts. That trade-in guarantee is possible only because the service department facilities provide for complete reconditioning or rebuilding of all used merchandise.

TURNOVER ON TRADE-INS

Naturally, that conditioning brings a more successful trade-in merchandising set-up. Today, trade-ins turn over on an average of every 60 days. In many cases, they're sold before they ever come on the floor. Customers have developed confidence in this firm's trade-ins to the point where they often put in advance orders for certain appliances, and wait until the right thing comes in.

"As I see it," says Mr. Bersano, "there can't be any half-way point in the handling of trade-ins. Either they must be sold 'as is,' at a very low price and without the benefit of a full guarantee, or they must be completely reconditioned and sold on much the same basis as new merchandise. We've found it profitable to handle them in the latter way. The attractive appearance of a completely reconditioned appliance assures customer interest in it. And its reliable condition, backed up by the same guarantee as is given on a new appliance, creates confidence.

RECONDITION COMPLETELY

"Since we're equipped to do practically everything except re-enameling—and whenever necessary we send that out—we can afford to recondition completely all used merchandise, and still sell it at an attractive price and get our money out. When service business is slow, we keep the shop busy rebuilding trade-ins. Thus, we never have a dead load of overhead in that department.

"This not only means that our service department costs are lower, but also that we can keep a year-around crew of reliable service employes and always be ready to handle rushes when they come along. We feel that in both sales and service departments, labor turnover is one of the most costly phases of operation, and we do everything possible to avoid it.

COMBINING WORK

"In the case of the service department, avoiding turnover is made possible by the combination service and rebuilding operations. In the sales department, it's dependent on paying higher than average commissions, and using only a small force.

"We pay our men 15%—as compared with 10% or less in some stores. And instead of using a lot of men, we only keep four. Each one of these men has enough floor time to keep well supplied with good leads. Consequently he can make a good living without having to wear himself out on canvass work.

"Having the opportunities he does, he's inclined to select his deals carefully from a credit standpoint, and to refrain from making extravagant claims which might reflect against the house. And, quite naturally, he wants to stay with us."

SERVICE MEN SPECIALIZE

The Oakland Appliance Co. shop employs four service men. Three of them handle all types of appliances, although each one more or less specializes in one particular line. The fourth man is a refrigeration service specialist. One of the general service men and the refrigerator service man work on the outside, the two others staying in the shop except during rush periods.

Service cars are equipped to handle all types of minor repairs at the home. Thus the customer saves money on many jobs, and the company is enabled to keep down operating overhead.

PAID A SALARY

All service men are paid on a straight salary basis, so that they are always assured of making a good living; this arrangement prevents any possible tendency to try to create work where it isn't needed.

The three general service men are not allowed commissions on leads. However, they're shown that the more deals the company makes the more service business will develop over a period of time, and consequently that it is to their advantage to turn in leads. Since salesmen do not have to split commissions on service leads, they're inclined to work these very actively. The refrigerator service man does get a small commission on leads he turns in.

EXTENSIVE ADVERTISING

The service department is advertised extensively in several ways. A three-quarter page advertisement in the washer repairing section of the classified telephone directory has proved one excellent source of service business; this large ad is supplemented by smaller listings under other appliance service classifications.

Both service and sales departments are advertised very effectively in foreign language radio programs. Oakland, like a good many other cities, has some large national settlements. The Oakland Appliance Co. has selected some of the most important of these nationalities and is catering to their people through musical radio programs in their respective foreign languages. Right now, the 15-minute weekly broadcast is entirely in Italian. Previously, programs were broadcast in Portuguese and several other languages, including, of course, English.

RADIO PROGRAM

The program is run in one language for about six months at a time, a long enough period for building a large listener following. Experience showed that it was usually a little while before people of any particular nationality discovered the program in their own language, and consequently that an extended broadcast schedule in one language was more effective than a split one which used one language one week and another the next.

"Never once have we felt a real depression in this shop," concludes Mr. Bersano. "And we attribute more of that favorable condition to our service department than to any other one thing. It is the foundation around which we have built this business. Service can be made not only self-supporting, but directly profitable."

Woman Dealer Knows Her Sex; Her Cooking Schools Are Select

ERIE, Pa.—A woman who admittedly is "in the appliance business to make money" and who, through a well-planned promotional program, seems to be doing a right good job of it is Miss Florence M. Dawley, Westinghouse dealer here.

One of Miss Dawley's most successful ventures is the cooking school which she conducts monthly in her demonstration kitchen for "experts." Invitations to this school are strictly personal, and the type of woman who is merely looking for a door prize or a few new recipes simply isn't asked.

Instead, the "students" of Miss Dawley's "electric cooking forums" are, for the most part, experienced cooks, and the groups always include owners or hostesses of her "local proving kitchens" as well as prospects. All owners invited (most of whom are already members of Miss Dawley's "Owners Club") are asked to bring a guest, and it is these guests whom Miss Dawley counts on selling before the school is over.

The owners themselves frequently take part in the various demonstrations, along with home economists from either Westinghouse or the local utility.

Miss Dawley's "local kitchen proof" program, started in 1937 and continued this year, also has proved quite successful, with an average of six to eight sales for each kitchen established. Hostesses of these kitchens, along with printed statements of their electric bills before and after the range installation, play an important part in the Dawley cooking schools.

Also helpful in obtaining leads and building goodwill is Miss Dawley's service department, composed of Kenneth Carr, Bob French, and Joe Liebel.

Last, but far from least among the factors contributing to Miss Dawley's success, is her own personality and her ability to make and keep friends.

With only the selling help of her sister, Mrs. F. H. Allison, and Salesmen Karyl Shallop and Bert Garzen, Miss Dawley sold 123 major Westinghouse appliances, including 25 ranges, during the first five months of the year. Last year, first season that she handled the Westinghouse range, she sold 64 units.

Altogether, in her 10 years of appliance merchandising (seven of which have been devoted to the Westinghouse line) Miss Dawley has sold 6,500 major appliances.

Indirect Lighting Plus a Canopy Effect Gives Emphasis To Display

NEW ORLEANS—Showroom modernization and improvement again proved an aid to increased sales in the case of Dixie Appliance Co. here.

Better lighting was the keynote of the remodeling program. Old direct lighting features, which had a tendency to draw attention to the lights rather than to the merchandise, were discarded and replaced by indirect lighting which highlights the "offset" refrigerator and radio displays along the wall.

Awning canopy effects further serve to emphasize the merchandise displayed along the wall. At the rear of the store a single refrigerator is located on a stand beneath a wooden canopy. This set-up also is well lighted and makes a splendid night display.

The soft even light furnished by the indirect lighting system is well reflected by the store's shiny white walls.

Customers Get $5 For Opinions on Store

FORT COLLINS, Colo. — Home Appliance & Electrical Co., refrigeration and appliance dealer here, paid $5 to find out what its customers liked about the store. And they not only found out, but the stunt resulted in a wealth of advantageous publicity.

The company joined with 14 other non-competitive Fort Collins merchants in a cooperative newspaper promotion which occupied a full page each week for 15 weeks. Usually, Home Appliance & Electrical Co. ran a two-column by three-inch advertisement on this page, telling of the lines which it handled and the services which it offered.

One week, however, the company utilized this space to tell all about the store, its personnel, its history, and its merchandise. The public was invited to submit articles on the subject: "Why the Home Appliance & Electrical Co. Is a Good Place to Trade." Rules stipulated that entries must be limited to 350 words, and that contestants must be residents of the Fort Collins area. An award of $5 was offered.

The following week, in a space double the size of its usual advertisement, the company presented the winning article.

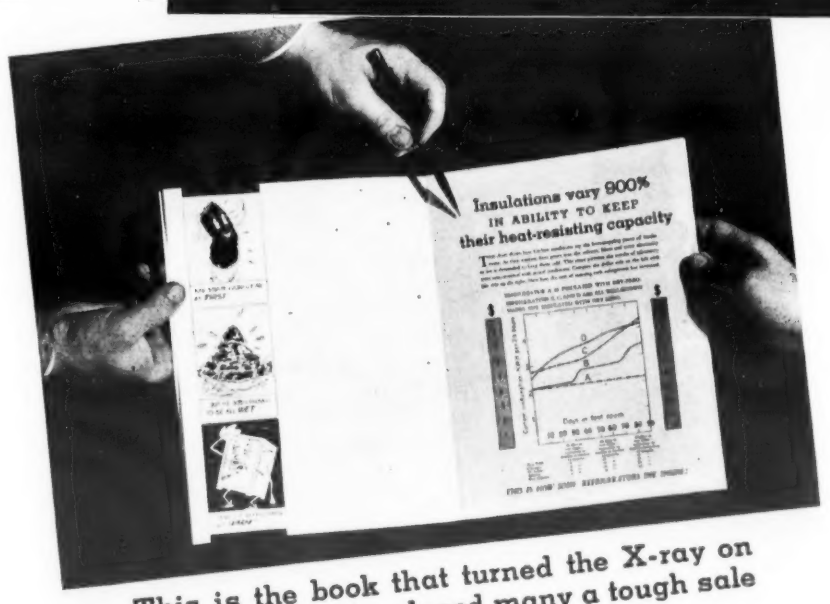
Aerocar Issues Booklet On Display Coaches

DETROIT — A new booklet on trailer-coaches for use in sales-display work has just been published by Aerocar Co.

Picturing coaches which it has sold to several large corporations in many fields, the booklet briefly describes the uses to which these coaches may be put.

107 DEALERS PROVE IT!

Dry-Zero Insulation DOES help sell refrigerators



This is the book that turned the X-ray on hidden Dry-Zero, closed many a tough sale

Here's extra proof of Dry-Zero's sales value. These are only a few of the spontaneous comments dealers took the trouble to write:

• • • •

I have had 6 sales this season entirely on a Dry-Zero demonstration— KENTUCKY

Your book on insulation facts has been a very great help in selling our merchandise— OREGON

The Dry-Zero booklet is the finest sales help I've ever seen. It worked every time it was used— WEST VIRGINIA

The information you have given us on Dry-Zero has clinched many sales— ILLINOIS

Showing a customer the facts in black and white convinces him more than an hour's sales talk— NEW YORK

I consider this book a real asset and it is a part of every one of our salesmen's portfolios— TEXAS

The graphs and cuts tell the story thru the eyes— CALIFORNIA

With the aid of your book it is not difficult to convince customers that we are using a superior insulation. It helps sales— PENNSYLVANIA

The Dry-Zero information gives us a decided edge over other makes of refrigerators with an insulation of lower rating— COLORADO

The book has certainly helped me to sell refrigerators. I could not be without it— NEW YORK

This book has been a definite help to us in closing sales because all refrigerators look good from the outside— MINNESOTA

Our department manager has built a very good sales story around your booklet that has helped close many deals for us men— OHIO

Your Book of Facts is an outstanding help to any salesman. Anyone not using it is missing a very good bet— WISCONSIN

• • • •

(Originals of these letters are on file in the offices of Dry-Zero Corporation, Chicago.)

● We have always believed that Dry-Zero should be a key point in the refrigerator salesman's story.

Now we *know* it. Dealers in 29 states have proved it—to themselves and to us.

Here is the proof:

First we gave a book of facts about insulation to dealers. Then we wrote 198 of them to find out how they used the book, and 108 replied. Here are the questions we asked and their answers:

Has the book helped you sell refrigerators? Yes—107. No answer—1.

Has it helped you explain the importance of insulation to your customers? Yes—107. No answer—1.

Have you shown prospects the book while talking to them? Yes—104. No—3. No answer—1.

Have you shown prospects the table showing that Dry-Zero is the most efficient insulation? Yes—105. No—1. No answer—2.

Has the fact that Dry-Zero is the most efficient insulation helped you sell Dry-Zero insulated refrigerators? Yes—107. No answer—1.

Would you like some new Dry-Zero sales-helps for use next year? Yes—106. No—1. No answer—1.

These answers tell but half the story. More than half of the dealers wrote enthusiastic comments on the sheet, proving that they were not merely responding to a skillfully worded questionnaire.

• • • •

These proofs of Dry-Zero's *sales* value match the scientific proofs of its peak efficiency and durability. Using these facts as dramatized in the Book of Facts has helped make more sales for others. It can help you too. Get your free copy now!

DRY-ZERO INSULATION
The Most Efficient Commercial Insulant Known

SEND: The Book of Facts for use in selling refrigerators. (One copy free. Extra copies 25¢ each.)

Name.....
Company.....
Street.....
City, State.....
Refrigerator handled.....
Extra copies at 25¢ each.....
Send to: Dry-Zero Corporation
Merchandise Mart, Chicago
AC8

West Virginia Theater Air Conditioned

HOLLIDAYS COVE, W. Va.—Air conditioning for Nick Anas' Cove theater has recently been completed by the service department of the Monongahela West Penn Public Service Co., under the supervision of H. H. Cooper, district manager and W. B. Hawkins, engineer.

Cooling for the theater is obtained by using 53° water from a 125-ft. well, drilled on the theater lot. A deep well turbine pump supplies 120 g.p.m. to coils located in a penthouse on top of the building.

A 5-hp. two-speed fan delivers 20,000 c.f.m. to the theater, which has been enlarged to seat 800 people. Air distribution is by means of insulated ducts connected to an anemostat, located in the ceiling of the theater.

The fan system is also used to heat the building in winter, by means of steam coils located in the plenum chamber, which are connected to a steam boiler in the basement of the theater.

Emergency call . . . belt needed fast . . . name, number, and make unknown. No time to waste, so GO TO GILMER . . . Gilmer has your belt!

Gilmer F. H. P. Belts FIT 4450 models of refrigerators . . . 247 makes of air-conditioners, oil burners, washing machines, etc.

Gilmer engineers build *only* belts, on the world's largest assortment of V-moulds. That's why Gilmer has the belt you need for every replacement job. Naturally, Gilmer Belts fit *right*, Gilmer service is fast, Gilmer jobbers carry full stocks.

. . . Get acquainted with Gilmers by stocking the popular 35-R Belt Assortment. Pays you over 41% clear profit! Ask your Gilmer jobber *now*.

L. H. GILMER COMPANY
Tacony, Philadelphia
THE OLDEST FIRM OF RUBBER FABRIC BELT SPECIALISTS

Throngs Attending Chicago Church Enjoy Cooling Provided By 105-Ton System

CHICAGO—Vast throngs who daily kneel in prayer in Our Lady of Sorrows church are kept comfortable by a 105-ton Westinghouse air-conditioning system, which serves the shrine, auditorium, novena office, chapel, and adjoining parish hall.

On Friday of each week, more than 70,000 people are attracted to this church of the Servite Fathers to attend a perpetual novena (nine days' prayer) to the Mother of God.

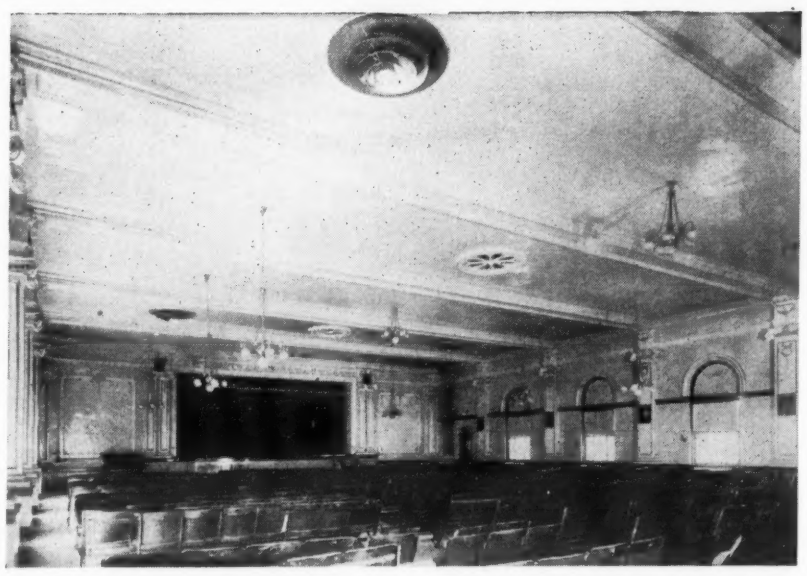
Installed by the Kroeschell Engineering Co. of Chicago, four separate systems supply 35,000 cu. ft. of conditioned air per minute to all parts of the building.

fresh outdoor air. The conditioned air is uniformly distributed to the chapel through special directional-flow grilles located above the altar.

Air is distributed to the parish hall by anemostats located in the ceiling of the room. Although each unit provides a flow of thousands of feet of air per minute, engineers report that people sitting within a few feet of the outlets can scarcely perceive any air motion. The anemostat units recirculate air in the room, while supplying fresh conditioned air which is mixed with the recirculated air in the outlet.

For the convenience of people who want to take a vacation and still not miss a novena, Father Keane of the Servite Order has announced a 7,000-mile novena excursion on an air-conditioned train, which will make a swing through the northwest, Pacific Coast, and southwest. Cost of the two-week trip is $159 and up.

Chicago Church's Parish Hall Conditioned



Anemostats in the ceiling distribute air to the parish hall of Our Lady of Sorrows church, conditioned by a 105-ton system which also serves the shrine, auditorium, novena office, and chapel.

Complete year-around air-conditioning systems are installed in the church auditorium and office. These systems cool and clean the air and dehumidify it in summer, and in winter warm, humidify, and cleanse the air.

Specially designed grilles and ductwork circulate and change the air constantly in the conditioned spaces. There are no radiators. Steam for heating and humidifying is provided by a central boiler plant.

A portion of the ductwork is acoustically treated to reduce transmission of any noise from outside. All duct work is concealed.

For the most comfortable conditions, a differential of 15° F. is adhered to, although the temperature is usually maintained at 75° F. Relative humidity, not exceeding 55% in the summer and a minimum of 40% in the winter, is provided. Automatic control of both temperature and humidity is accomplished by thermostats regulating the compressors and heating equipment.

In the chapel of the Servite Fathers, a Westinghouse "Unitaire" self-contained air-conditioning unit provides summer cooling and dehumidification. This unit is located in the basement, below the chapel, and is connected to a supply duct system that circulates and brings in

Delco-Frigidaire Has Exhibits At Drug Show

DAYTON, Ohio—Delco Frigidaire division of General Motors Corp. had two booths at the drug show held in Memorial Hall here in connection with the sixteenth annual convention of the Ohio State Pharmaceutical Association. More than a dozen definite prospects were uncovered among the druggists visiting the booths, where a store conditioner was on display and in operation.

Penney Store In Sarasota Installs Air Unit

SARASOTA, Fla.—In connection with a remodeling and repainting program, the store of the J. C. Penney Co. here has installed a circulating air unit, which cools and perfumes the air during the summer months.

Checked *again, again, and again!*

● Ansul laboratory technicians check Ansul products again and again through the steps of production. The individual analysis tag on every Ansul cylinder is Ansul's certificate of merit—*your* proof of Ansul quality.

There is an Ansul Distributor near you

ANSUL CHEMICAL COMPANY
MARINETTE, WISCONSIN

ANSUL SULPHUR DIOXIDE METHYL CHLORIDE

Air-Conditioning Orders Booked In May Totaled $3,798,967, U. S. Reports

Item	Value of Orders Booked May, 1938	May, 1937	Jan.-May, 1938
Total	**$3,798,967**	**$6,472,804**	**$18,374,143**
Air Conditioning Group—Total	**2,197,393**	**3,598,802**	**10,586,473**
Unit Systems—			
Self-contained (shipped substantially complete)	857,794	835,541	3,097,335
Not self-contained (shipped in sections), including refrigerating or cooling medium	595,700	832,975	2,548,560
Central-station Systems, excluding installation if installed—			
Human comfort (including refrigerating or cooling medium sold separately or otherwise for air conditioning)*	413,831	1,104,603	3,266,419
Industrial (including refrigerating or cooling medium sold separately or otherwise for air conditioning)*	34,972	136,742	306,937
Refrigerating or cooling medium sold to contractors or other distributing outlets (not manufacturing air-conditioning equipment) for air-conditioning systems, when such knowledge as to the application is available	151,856	364,145	677,717
Air washers, including pumps and motors and control where furnished	50,445	119,987	227,394
Air filters (not including sales of filters used with machinery other than fans)	30,391	38,673	132,933
Humidifiers	62,404	166,136	329,178
Fan Group—Total	**$1,170,332**	**$2,108,469**	**$ 4,975,257**
Fans, including bearings, pulleys or couplings (if furnished)—			
For public and semi-public buildings	178,963	212,237	867,111
For general industrial uses	301,813	545,766	1,227,044
For mechanical draft	66,020	402,532	342,074
For jobbers stocks and unknown uses	114,245	303,372	434,225
Small housed and propeller fans—			
Direct connected small housed blowers with motors and control (merchandise motors)	141,337	150,592	550,867
Propeller fans, direct connected and belted (for ventilation only)	305,789	402,232	1,091,182
Driving mechanism for general fan use (not reported above)—			
Electric motors and controllers (manufactured or jobbed)	60,197	85,010	424,378
Steam engines and turbines (manufactured or jobbed)	1,968	6,728	38,376
Unit Heater Group—Total	**$ 431,242**	**$ 765,533**	**$ 2,812,413**
Industrial Type Unit Heaters, including heating element and motors where furnished—			
Equipped with blower-type (centrifugal) fans	38,113	140,248	351,570
Equipped with propeller-type fans	157,774	299,183	1,018,844
School Room Type Unit Heaters, including heating element and motors and control where furnished.	118,099	78,492	838,869
Indirect Heating Surface (not including unit heater surface)—			
Steel pipe coil type (manufactured or jobbed)	264	...	8,370
Cast iron type (manufactured or jobbed)	4,964	8,746	31,183
Copper or aluminum type (manufactured or jobbed)	112,028	238,864	563,577

*Includes incidental equipment, such as temperature, motor, humidity, and electrical controls, dampers, outlets, etc., as are sold with each.

Orders Booked In June For Conditioning Totaled $3,759,264, Govt. Reports

Item	Value of Orders Booked June, 1938	June, 1937	Jan.-June, 1938*
Total	**$3,759,264**	**$7,440,019**	**$22,097,743**
Air Conditioning Group—Total	**1,947,991**	**4,226,591**	**12,498,800**
Unit Systems—			
Self-contained (shipped substantially complete)	660,351	1,271,474	*3,722,022
Not self-contained (shipped in sections), including refrigerating or cooling medium	441,011	1,046,960	2,992,571
Central-station Systems, excluding installation if installed (including refrigerating or cooling medium sold separately or otherwise for air conditioning)†			
Human comfort	509,547	1,113,794	3,775,966
Industrial	35,200	99,974	342,137
Refrigerating or cooling medium sold to contractors or other distributing outlets (not manufacturing air-conditioning equipment) for air-conditioning systems, when such knowledge as to the application is available	152,238	374,602	829,955
Air washers, including pumps and motors and control where furnished	39,566	115,335	266,960
Air filters, not including sales of filters used with machinery other than fans	34,951	41,290	167,884
Humidifiers	72,127	163,162	401,305
Fan Group—Total	**$1,282,459**	**$2,246,876**	**$ 6,257,716**
Fans, including bearings, pulleys, or couplings (if furnished)—			
For public and semi-public buildings	171,471	197,762	1,038,582
For general industrial uses	250,719	523,271	1,477,763
For mechanical draft	123,697	395,343	465,771
For jobbers stocks and unknown uses	130,042	209,300	564,267
Small housed and propeller fans—			
Direct connected small housed blowers with motors and control (merchandise motors)	178,931	162,736	729,798
Propeller fans, direct connected and belted (for ventilation only)	347,108	645,301	1,438,290
Driving mechanism for general fan use, not reported above (manufactured or jobbed)—			
Electric motors and controllers	55,743	112,380	480,121
Steam engines and turbines	24,748	783	63,124
Unit Heater Group—Total	**$ 528,814**	**$ 966,552**	**$ 3,341,227**
Industrial type unit heaters, including heating element and motors where furnished—			
Equipped with blower-type (centrifugal) fans	58,932	95,583	410,502
Equipped with propeller-type fans	198,920	515,470	1,217,764
Schoolroom type unit heaters, including heating element and motors and control where furnished.	109,935	89,388	948,804
Indirect heating surface, not including unit heater surface (manufactured or jobbed)—			
Steel pipe coil type	25	1,009	8,395
Cast iron type	10,233	13,742	41,416
Copper or aluminum type	150,769	251,360	714,346

*Revised figures for self-contained unit systems, not previously published, are: January, $336,416; February, $324,113; March, $757,657; April, $793,652; and May, $849,833.
†Includes incidental equipment, such as temperature, motor, humidity, and electrical controls, dampers, outlets, etc., as are sold with each.

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Commercial Refrigeration

Milk-Cooling Stations In Dairy Districts Cool Milk In Big Lots For City Consumption

By Alfred Jones

GRASS LAKE, Mich.—Two milk-cooling stations in this small town of less than 1,000 population are running full time supplying milk for consumption in Detroit, some 60 miles to the east.

Owned by the Daily Creamery Co., Inc. of Hamtramck, Detroit suburb, and Ebling Creamery Co., Detroit, the two cooling stations were established here because Grass Lake is in the center of a wide dairy farm area producing high-grade milk.

General procedure in each plant is the same. Haulers collect cans of milk from the farms, each hauler having a truck and a scheduled round of calls. They bring the milk to the cooling station, where it is weighed and poured into a large tank.

COOLED IN AERATOR

From this tank the milk is pumped up through a pipe to the top of the aerator, or cooler. This aerator consists of a number of pipe coils, one above the other, and a trough below the coils. Cold well water is pumped through the top section of coils, and sub-freezing ammonia is circulated through the bottom coils.

The milk runs down the outside of the coils, and by the time it drips into the trough its temperature has been reduced to between 36 and 38° F.

From the trough the milk pours through a measuring device into the milk trucks which take the milk to the creameries in the city.

The Ebling milk trucks are specially built for the purpose, and are well insulated so that the temperature of the milk rises not more than 2° en route to the city.

In both stations, the cans in which the milk is brought from the farms are thoroughly cleaned and sterilized in a complicated washing-drying machine, Ebling's being a straight-line type, Daily's a rotary.

The Daily cooling station is operated and managed by Anthony Cwiek, who has been in the milk business for many years, and who has been in charge of the milk-cooling station since its establishment just over two years ago.

6-TON UNIT

A 6-ton Baker refrigerating unit, stepped up to 450 r.p.m., is the heart of the cooling system, Mr. Cwiek explained. It is driven by a 20-hp. G-E motor.

The machine is self-lubricating, and handles 400 lbs. of ammonia, pumping it into a condenser 14 feet long and containing a 28-coil pipe.

The compressor is firmly installed in the floor on the opposite side of the room to the milk cooler, and the condenser is fastened to the wall and ceiling above the compressor, running horizontally.

Well water is used to cool the ammonia in the condenser, and after being cooled, the ammonia passes into a receiver below the condenser. From the receiver, the ammonia is passed through a pipe along the ceiling to the milk cooler.

TRAP IN CONDENSER

In the condenser, the ammonia has to pass under a specially constructed trap in the valve, Mr. Cwiek pointed out. Overflow water from the condenser and from the compressor cooling system is drained into an outlet in the floor.

Before being admitted to the coils in the milk cooler, the cold, liquid ammonia is regulated by a float system which keeps the flow of the refrigerant into the cooler at an even, steady rate, thus preventing overflooding.

The ammonia circulates through the lower six coils in the cooler, which are made of 2-inch pipe. Thus circulating, the ammonia absorbs heat from the milk flowing down over the outside of the coils.

After circulating through the cooler coils, the ammonia is returned to the compressor to begin its cycle again. Returning ammonia is extremely hot.

Above the ammonia coils in the milk cooler is an 18-coil section of 1½-inch pipe. Cold well water is circulated through this section, cooling the milk to about 50° F.

6,000 LBS. PER HOUR

Cooling capacity of the station, Mr. Cwiek said, is 6,000 lbs. an hour, and the plant can be operated day and night. Present volume of milk cooled at the station is 10,000 lbs. a day.

The milk is purchased from farmers in the districts of Grass Lake, Waterloo, Chelsea, Pinckney, Gregory, and Unadilla, Mr. Cwiek explained. The territory is split into three sections, with three haulers each having a scheduled daily route.

One load of milk a day is trucked to the Daily creamery in Hamtramck. The trucks used for delivery are of the enclosed type and are insulated with 2 inches of cork all around the interior, to comply with a state law, Mr. Cwiek said.

The milk can washer is an important unit in the operation of the cooling station, Mr. Cwiek declared. Before it was put into use, about one can in five brought from the farms contained sour milk.

Chief reason for this was that the farmers had no method of properly cleaning the cans.

The rotary washing machine insures proper cleaning now, Mr. Cwiek said, and there is no more sour milk. After being emptied, a milk can is placed upside down in the first compartment of the washer and rinsed by a jet of water.

The water tank on the washer contains an alkali solution warmed to 160° F.

Rinse water and milk are drained into a can and given to the farmer for his pigs.

Next, the can passes into the second compartment of the washer, where it is sprayed inside and out with scalding water. In the third compartment, the can is subjected to a steam bath. In the fourth and final compartment, the can is hot-air dried.

The cleaned cans are delivered back to the farmers by the haulers on their regular daily pick-ups.

The building housing the milk-cooling equipment is an old frame structure down by Grass Lake itself. There is a steam heating system so that the plant may be operated the year around.

In what once was a large barn, the Ebling milk-cooling station is managed by A. E. Hustler, who has been in the milk business for 30 years, beginning on his father's farm near Saginaw, Mich.

ON SECOND FLOOR

The building is a two-story structure, the milk cooler being on the second floor, along with Mr. Hustler's office and the milk-testing room.

Refrigerating equipment, receiving station, and can washer are on the ground floor. There is a driveway right through the building in which the trucks stand while being loaded.

Procedure is similar to that in the Daily station. Eleven haulers bring in the milk from farms, the milk is weighed and emptied into a large tank, and the cans are run through a Rice & Adams straight-line washer.

Milk is pumped up to the aerator-cooler on the second floor. The cooler consists of eight water coils above 16 ammonia coils. Average daily volume of milk cooled is 35,000 lbs., Mr. Hustler said.

After being cooled to 36° F. by the cooler, the milk drains into the trough and drops through a pipe into the truck below. Two trucks are used, alternating daily runs to and from the Ebling creamery in Detroit.

One truck has a capacity of 200 gallons, the other a capacity of 218 gallons.

TWO COMPRESSORS

Refrigerating equipment consists of two York ammonia compressors, one a 10-ton unit, the other a 5-ton unit, driven respectively by a Western Electric 20-hp. motor, and a W-E 15-hp. motor.

The Ebling cooling station has been in operation for about 12 years, Mr. Hustler said, having been under his supervision the entire time.

Both compressors pump ammonia into the same condenser, which is a 16-coil system 20 feet long mounted on the wall behind the compressors.

The compressors are cooled by well water, and either compressor can handle a light load by itself. Mr. Hustler usually turns on the 10-ton unit in the morning and keeps the cooling load on this one unit until the bulk of the milk is brought in by the haulers on their daily round. Then he turns on the 5-ton unit to share the work of cooling.

Milk is tested for butter fat content in a room adjacent to Mr. Hustler's office. Samples of milk are placed in small bottles with a certain amount of water and acid, the bottles are placed in a revolving machine, and are whirled rapidly to separate the butter fat from the remainder of the milk.

By a graduated scale on each bottle, Mr. Hustler can measure the percentage of butter fat. All percentages are written on a record chart, along with the source, amount, and other concise information.

In this way, it is possible to determine the farms and herds of cows which supply the best milk.

Milk Station Units

Top: A. E. Hustler, manager of the Ebling station, beside the compressors; bottom: the aerator-cooler in the Daily plant and Manager Anthony Cwiek.

Two New Airtemp Dealers Appointed In Ohio

DAYTON, Ohio—Delmar Hughes of the Hughes Heating & Air Conditioning Co., Airtemp distributor, has announced the appointment of two new dealers in his territory. They are: E. E. Tagg of Delaware, Ohio, and Gene Fosdick of Liberty, Ind.

L. O. Warner of Refrigeration Service Shop, Inc., Carrier air-conditioning distributor, has announced the appointment of James P. Noble as a new dealer in Springfield, Ohio. Noble will operate under the name of The Refrigeration & Heating Co., handling the complete Carrier line.

McCulla Heads Cooling Division of B. & O. Radio

NEWARK, N. J.—Ivor McCulla has been placed in charge of the commercial and comfort cooling division of B. & O. Radio, Inc., of this city, according to C. W. Malliet, sales manager. Arthur Suit has joined the B. & O. organization as head of the heating division.

Barnes Installs Schaefer Cabinet In Dance Place

RED OAK, Iowa—One of the latest model 12-hole Schaefer ice cream cabinets has been installed in the Lovit ice cream, dine, and dance place owned here by Ralph Barnes.

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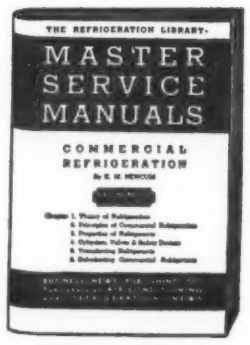
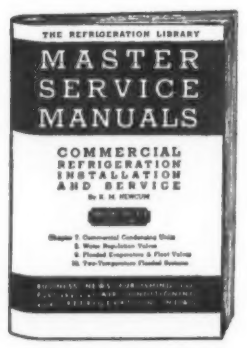


Commercial Manual C-1



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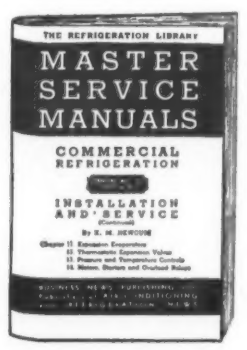

Commercial Manual C-3

MANUAL NO. C-1 — The theory and principles of refrigeration presented in a more complete manner than in previous manuals. Properties of refrigerants, including effect on lubricating oils, inflammability and explosive characteristics. Types of refrigerant cylinders, valves, and safety devices. Drying and transferring refrigerants. 96 pages. Price $1.00*.

MANUAL NO. C-2—Installation and service methods. Detailed information on commercial condensing units and their component parts. Water regulating valves, both electric and pressure-actuated types. Flooded evaporators and low side float valves. Two-temperature low side float valve flooded systems. 112 pages. Price $1.00*.

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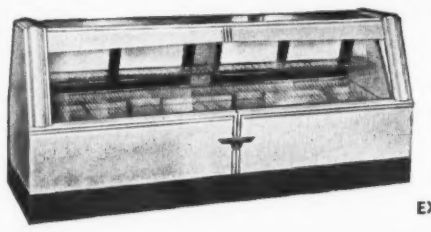

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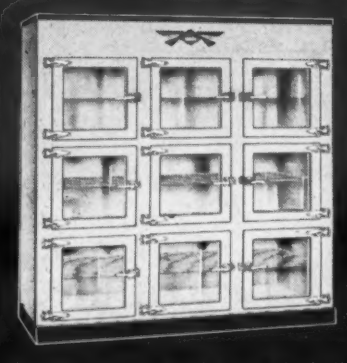

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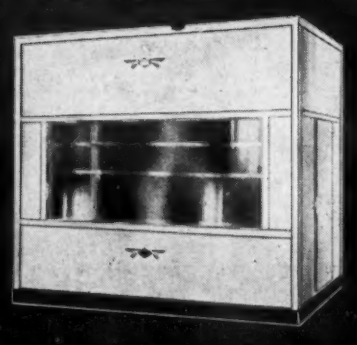

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Stoker News

Compact Sales Organization, 'Booster Fee' For Prospect Tips, Get Results For Dealer

By Henry Knowlton, Jr.

DETROIT — Ten retail salesmen supplemented by 10 metropolitan dealers is the stoker selling organization established by S. J. Akridge, manager of the stoker department of the Republic Supply Corp., distributors for Combustioneer stokers here.

"We do not want too many salesmen in our retail organization," Mr. Akridge says. "Our policy is to keep the men we have getting business, and reduce the turnover. If a stoker selling organization sells 50 units a month, and has 50 men working, they do not have a sound organization. We would much prefer to have 10 men sell five or more units each and make a good living."

Mr. Akridge joined the Republic Supply Co. last spring after a number of years with the Iron Fireman organization in Cleveland and Detroit. He believes that the dealer organization which Republic has for Crosley refrigeration will be an excellent outlet for stokers, when the dealers learn that the stoker business is not a "fill-in" affair, but a year-around proposition.

MUST SELL YEAR-AROUND

Stokers are sold every month in the year, Mr. Akridge asserts, and the appliance dealer must learn that he can always get business, no matter what the weather happens to be.

He has found from past experience that the appliance dealer is apt to give the stoker business a whirl in the fall, sell 9 or 10 units during a few weeks, and then turn his attention to other things. Mr. Akridge feels that the appliance dealer must learn that stoker selling is a non-seasonal, full year business.

At the present time the Republic organization is selling stokers on FHA terms or for cash. The liberal Federal Housing Administration loans from the major finance companies and banks are doing a great deal for the stoker business, and a surprising number of cash deals are making an appearance at this time, Mr. Akridge states.

"Just recently I accompanied one of my salesmen on a first call to the home of a prospect who lives in a suburban district. I sensed that he was ready to do business, so immediately started to write up the order. After the prospect confessed that three of his friends had our Combustioneer stoker, and were very well satisfied, I obtained the order immediately. The deal was cash, on the line.

"We closed another interesting cash deal just the other night. During the course of the sale we found that the prospect's three brothers and his father all owned Combustioneer stokers. With four units in the family, getting the order was a mere formality. Public acceptance of a quality product is one of the most important factors in the sale of automatic stokers. For this reason I have never associated myself with anything but a quality stoker, backed by a sound manufacturer," Mr. Akridge said.

HOUSEWIVES GET PRIZE

The Republic organization makes good use of the "booster fee" technique which has long been popular with successful automatic heating sales organizations. In this instance the "prize" is a glass coffee "Vacullator," of the type which has been popular with housewives in recent years.

If the owner of a Combustioneer gives one of the Republic salesmen a tip on a prospect, and he closes the deal within a reasonable length of time, the user is presented with the glass coffee maker. Mr. Akridge finds that this prize is more successful than a cash "booster fee" in keeping satisfied owners working for his sales organization.

Mr. Akridge divides his time between assisting his 10 retail men and working with his 10 metropolitan dealers. No wholesale man is employed.

William H. Blake, who was formerly associated with the commercial department of the Iron Fireman Co. in Detroit, has recently become associated with the Republic Supply Co. and will handle the sale of commercial and industrial Combustioneer stokers for Mr. Akridge.

Prize Winners In Essay Contest Will Get Credit Certificates Towards Free-Man Stokers

CHICAGO — A prize contest slanted to include only prospective customers for Free-Man stokers was launched here recently by the Free-Man division of the Illinois Iron & Bolt Co. through its advertising agency, L. W. Ramsey & Co.

Newspaper advertisements in 1,000 markets will offer rewards of $10,000, all in the form of credit certificates for Free-Man stokers, between now and the closing date, Sept. 1.

Prospects must contact Free-Man dealers to get information on which an intelligent entry may be based, and the dealer may determine whether or not the prospect meets the eligibility rules, which provide that only persons having a heating plant may compete.

While dealers will share in the cost of newspaper advertising in their own community, the Free-Man company will control all copy used in the campaign. Dealer agreements provide that advertising will be placed on a 50-50 basis, "with advertising copy to be furnished by the Free-Man stoker division and scheduled during the contest period by the company's duly appointed advertising agency."

Advertising credits are given each dealer, based on his purchase of Free-Man stokers, and he may order advertising material within this limit. The dealer must, however, pay for all advertising over this amount, although he may receive refunds on future orders.

Participants in the contest must give 10 or less reasons "Why I Would Like to Have a Free-Man Stoker," stated in 100 words or less.

Stoker Manufacturer's Association Adopts Uniform Rating Formula

CHICAGO — A uniform stoker rating formula, prepared by the Engineering Committee of the Stoker Manufacturer's Association, was recently adopted by the members of the Association.

The formula covers a range of stoker sizes, from those used in small residences, to units capable of feeding 1,200 lbs. of bituminous coal per hour.

Stated simply, the formula is: "The size of stoker in pounds of coal per hour equals the load in B.t.u. per hour divided by the heating value of the coal, times the overall efficiency of the stoker and boiler or furnace."

The standard provides that the percentage to be added to the Equivalent Direct Radiation Load for pipe loss and pick up shall not be less than 33%.

A booklet, known as the "S.M.A. Uniform Stoker Rating," contains complete data, tables and charts on stokers from 10 lbs. capacity to 1,200 lbs. Single copies of the booklet are available from Marc G. Bluth, secretary, Stoker Manufacturers' Association, 307 North Michigan Ave., Chicago, Ill. No charge is made for the booklet.

Stokol Production Hits Peak, Distributors Told At Convention

CHICAGO—Celebrating the 20th anniversary of the Schwitzer-Cummins Co., Louis Schwitzer, president, and Walter Sormane, assistant sales manager, met here Aug. 1 with Stokol distributors from the midwest, for the purpose of scheduling deliveries to meet dealer requirements during the peak selling months of September and October.

Held in the air-conditioned Palmer House the meeting was attended by the company's distributors from Pennsylvania, Ohio, Michigan, Indiana, Illinois, Iowa, Wisconsin, Minnesota, North and South Dakota, Missouri, Kansas, Virginia, and Tennessee.

Addressing the assembled distributors Mr. Schwitzer said, "Although government reports indicate that stoker shipments by the industry as a whole are approximately 33% below shipments for the corresponding six months of 1937, shipments of Stokol Hydraulic Units, the new Triplex worm drive stoker, stoker-fired winter air-conditioning units, and blower-filter units have reached an all time peak. A second shift will be put on to double production if orders continue at the present rate.

"We are employing more men in the fabricating and assembly of stokers and furnace units than at any time in the history of the company. Our dealers are capitalizing on the program of the Federal Housing Administration which makes it possible to finance payments over a three year period."

An aggressive drive during August, known as the "Sell-ebration Campaign," will include the use of poster panels, road signs, and newspaper advertising in more than 1,000 communities where Stokol dealers are located. Every sale made during the campaign is to be considered a candle on Mr. Schwitzer's birthday cake.

In announcing the campaign to every plant employe and men working in the field, Mr. Schwitzer asserted that, "More sales make more jobs . . . more work hours for the men in our plants . . . for the men in plants who furnish our materials . . . for the men employed to install Schwitzer-Cummins products.

"This program is a joint effort to make more jobs and more working hours. Every additional Stokol sold means a job for a deserving employe. In this way salesmen in our organization can improve business."

Special awards are being given dealers and salesmen during the period of the campaign. Schwitzer-Cummins executives report that advance orders for immediate delivery are substantially ahead of August shipments for one year ago.

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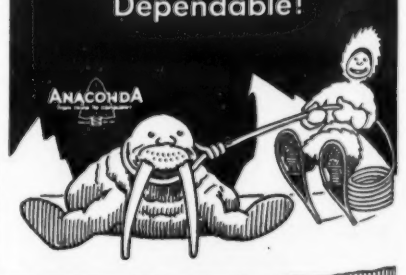

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Major Appliances

Washer Trade-Ins Used By Dealer To Close Sales Going & Coming

HUDSON, N. Y.—Washing machine trade-ins, usually considerable of a problem to the average appliance dealer, have been converted into a means of selling new washers by a neat bit of sales strategy employed by Dow B. Hover, full-line Westinghouse dealer here.

Mr. Hover never junks a traded-in washer that can possibly be put into operating condition. Instead he repairs and rebuilds these units and keeps a stock of "bargains" at the rear of his sales floor.

Whenever a bargain-hunter appears on the scene, Mr. Hover is ready and willing to talk any price she seems interested in; in addition, he makes her a standing offer that if she buys a used washer from him she may trade it back in at full value at any time on a new electric washer.

This proposition keeps old washers moving out of his store. The rest of his policy keeps them moving back in.

The second-hand machines naturally necessitate frequent service calls. So every time that a service man is sent out to repair one of these units, he takes on the role of a salesman as well, and does his best to get in a few good boosts for the new Westinghouse washers.

This continual encouragement, coupled with Mr. Hover's trade-in offer, keeps the old washers coming back pretty regularly. In fact, many units have been on his sales floor two or three times, a new washer having been sold each time they were returned.

As result of this scheme's success, Mr. Hover rates his "selling" service department, along with cold canvassing and his "Owners Club," as a top-notch business producer.

F-M '39 Line of Radios Has Only 6 Models

INDIANAPOLIS — A simplified line of radios, with no extremely low priced models and only one table set, has been announced for 1939 by Fairbanks, Morse & Co. With only six models in the new line, prices range from $69.95 for the 7-tube table unit to $159.95 for the 12-tube console grande.

Features claimed for the new sets are: instant electric tuning, "Acousti-Sealed" tone chamber, "Monitor" panel, complete "Permeability" tuning, cabinets of high-grade interlocking construction, and improved short wave reception.

Complete list of all models in the new line follows:

Model	Type	Tubes	Price
7AT	table	7	$ 69.95
7AC	console	7	89.95
7AG	console grande	7	99.95
9CC	console	9	114.95
9CG	console grande	9	129.95
12BG	console grande	12	159.95

• • •

541,898 Washers Sold In First 6 Months

CHICAGO — Washing machine shipments for the first six months of the year totaled 541,898 units, a drop of 42.9% from the 949,328 units shipped during the first half of 1937, according to figures released by J. R. Bohnen, executive secretary of the American Washer & Ironer Manufacturers Association.

June shipments showed an even greater drop (45.2%), with 78,354 units this year against 143,073 in June 1937.

Despite the drop in unit volume, Mr. Bohnen reports that the average retail price of washers shipped during the first half of 1938 was slightly higher than that for the corresponding period last year, the figure being $73.96 compared to $72.76.

Washers retailing at $70 and more constituted 37.5% of shipments for the six-month period this year, while comprising 40.5% of total shipments for the first half of 1937.

Orkil Electric Wins In G-E Home Laundry Sales Campaign

HARTFORD, Conn.—Orkil Electric Co., appliance distributor here, has emerged the winner in the nation-wide "Triple Play" 10-week sales drive carried on by General Electric Co.'s home laundry equipment section.

Quotas for both new dealers and unit sales were assigned to all distributors, and a performance rating made up from the average of the two. The Hartford organization led the field with a realization of 314.3% of quota for the 10 weeks.

Runners-up in the drive were Perry-Mann, Columbia, S. C.; Furbay-Sommer, Canton, Ohio; and G-E Supply Corp. branches in Dallas, Tex., and Salt Lake City. Silver trophies were awarded the winners.

Glen Chaffer, G-E home laundry sales manager, points out that despite depressed business conditions generally, no less than 24 distributors bettered the unit sales quotas, and 29 went over the new dealer quotas, a record for G-E home laundry sales campaigns.

Dayton Range Sales Up 79% This Year

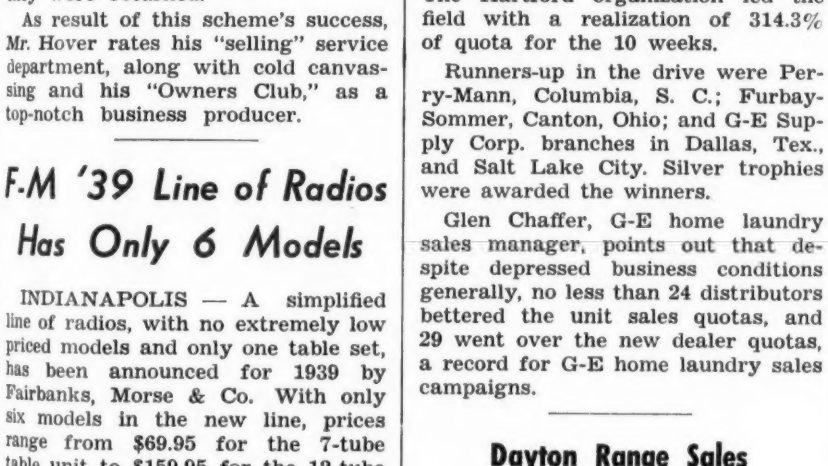
DAYTON, Ohio—Sales of electric ranges during the first six months of this year are 79% ahead of those for the same period of last year, according to reports by 64 dealers here.

For June alone, electric range sales showed a gain of 83% over the corresponding month of 1937.

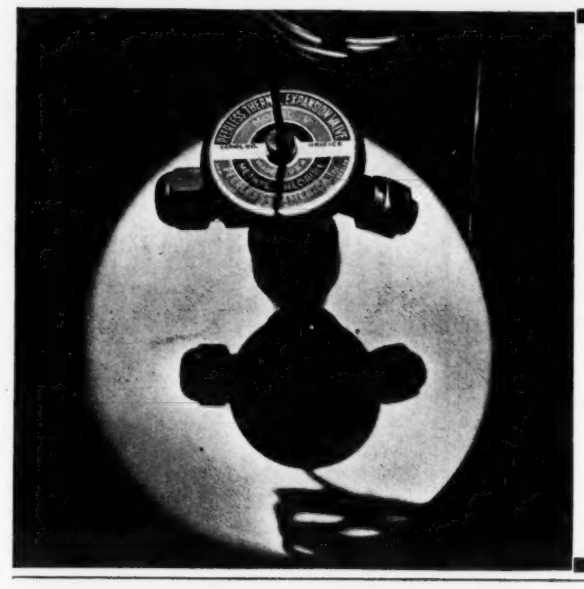
Adds Line of Ranges

ASHEVILLE, N. C. — Reusing's, Inc., local appliance outlet, recently has added the Universal electric range to its line of major appliances.

A 'Console Grande' Gets Some Support



A trio that is likely to go places in the radio world. Carolyn McKay (left) and Billie Washburne (right) are two rising young Chicago radio actresses, and in the center is one of the console grande models of the 1939 Fairbanks-Morse radio receiver line, now being introduced to dealers.



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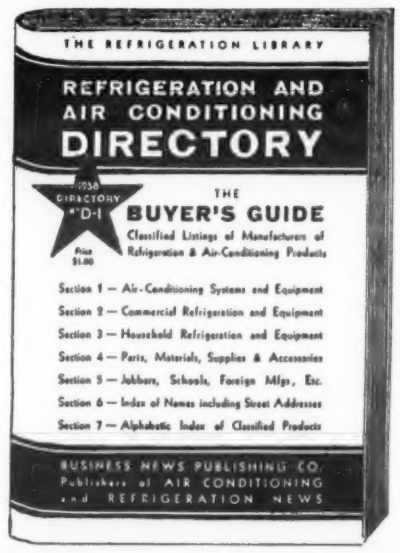
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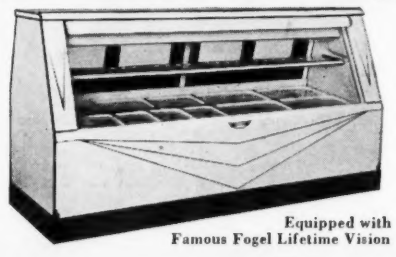

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Engineering

Stack Effect - - The Missing Variable Of Bunker and Coil Design

By Hal W. McPherson, The Electrimatic Corp.*

THERE has been such a wide discrepancy in the "K" factors observed in heat exchange from gravity convection refrigeration coils to air that I was some years ago prompted to investigate the possible causes of this erraticism. My present conclusion is that this elusive behavior is mostly due to variations in air movement through the coils. This in turn pins the responsibility squarely on the bunker design.

Bunkers, up to now, have been pretty much drip pans hung underneath coils. Maudlin efforts have been made along various means of securing as free an air passage to and from the coils as is compatible with complete condensate catching or guttering.

The results secured when using even the same general designs and theories of coiling and bunkering vary astonishingly. We have long believed that a bunker could have only a restricting effect—as certainly all bunkers we knew of did. This, however, is not the case.

Several years ago the writer first discovered that the force producing air movement through gravity coiling is the stack or chimney effect of the bunkers. Air movement through "stack effect" is due to the difference in weight of the column of air in the stack versus the weight of an equal column of the ambient.

The theoretical value of the air velocity discharged from the stack may be found from the equation I.

Equation I.† $V = 481.2 \times \sqrt{h \times (T^1 - T^2)} \div (T^1 + 460° \text{ F.})$ in f.p.m.

h = the height of stack in feet

T^1 = the ambient temperature

T^2 = the temperature of the air in the stack

†Equation I is derived from the well known equation—$V = 4005 \sqrt{h}$".

Air movement is so modified by stack losses that the results indicated by Equation I are not to be relied on directly. Hence it became necessary to construct Fig. 1 to replace Equation I.

The theoretical stack velocities are roughly double those shown in Fig. 1. The reduction suffered on actual tests is due to stack losses from warming up of the air by heat picked up from stack walls, static resistance of the stack and coils, direction changes, etc.

The frequent embarrassment of refrigeration engineers on account of humidity troubles is due to their custom of calculating the heat load on a fixture on a basis of sensible heat only. A proper installation requires the evaluation of both the sensible and latent heat gains of the fixture or cooler to be refrigerated. At the risk of being boresome, I quote a previous article of my own on the subject of winter high humidity troubles:

"I take exception to the common belief that what is required for winter operation is a smaller condensing unit and a smaller coil. I have pretty much reached the conclusion that there is no advantage, at any time, for undercoiling. We have definitely proved that sliming trouble can be relieved by either or both of the following:

"1—Slowing down the compressor.

"2—Increasing the coiling, or its effectiveness.

"Let us examine the facts—First there are only a certain number of B.t.u. we can remove without lowering the temperature of the cooler excessively; second, at a lower compressor speed with constant coiling the running time is increased, the back pressure is raised and the coil surface is warmer; third, if we reduce both compressor speed and coil surface proportionately the coil surface will remain at the same temperature and only the running time will be increased.

"Problem: Will a small cold surface remove more moisture than a large warmer surface in the same running time for the same B.t.u. of sensible removal?

Example: 40° F. cooler, 2.868 gr. per cu. ft. moisture. (See Table 1 for results.)

"Hence nothing is accomplished by reducing the coiling in most cases."

Fig. 1 gives representative design factors based on actual tests, conducted on fin surfaces effectually filling the top of the stack for a height of between 9 inches and 12 inches. This chart may be used for approximate calculations for any conservative coiling by taking into consideration the log mean temperatures.

In most refrigeration applications heat is largely transferred by air movement. Radiation and conduction are generally negligible in the refrigeration coilings. For example: in an 8 foot stack, iron prime surface at 11° F. and 32° F. cooler will transmit (32° F.—11° F.) × 4.3 = 90 B.t.u. per sq. ft. per hour in total. Of this amount, according to Stefan & Boltzman, the maximum possible radiant exchange is

Equation II—$H = .154 \times \left[\left(\frac{Ta_1}{100}\right)^4 - \left(\frac{Ta_2}{100}\right)^4\right]^{\ddagger}$

$= .154[(4.92)^4 - (4.71)^4]$

$= 15$ B.t.u./sq. ft./hr.

or a mere ⅙ of the total heat exchange. Ordinarily only about 1/20th is due to radiation.

‡Ta = Absolute temperature ° F.

Hence one precaution in using stack or bunkered coils is that the ducts must be designed of sufficient areas to pass the amount of air necessary, at the velocity obtainable, in order to move the required B.t.u. under the desired conditions.

In ordinary 40° F. market cooler work about 800 c.f.m. per ton seems to be good practice; 1,200 c.f.m. per ton would seem to be the upper and 400 c.f.m. per ton to be the lower limits. At freezing temperatures greater variations in airflows may be indicated. Much thought will be given in the near future to the use of stack coilings for freezers.

All other means of coiling for low temperatures have been so unsatisfactory that this new possibility may prove very interesting. The stack area through which this air must pass in the accompanying illustrations is the width (W) times the length.

The theoretical sensible "K" factors are between 40 and 80% greater

(*Concluded on Page 15, Column 1*)

*Paper prepared by Mr. McPherson and presented by J. H. Liddle, Sydney, before the Australian-New Zealand Congress on Refrigeration.

Table 1—Problem In Heat Removal

Example: 40° F. cooler, 2.868 gr. per cu. ft. moisture

	23° F. Gas Full Coiled	6° F. Gas Half Coiled
Gr. moisture content per cu. ft. of air touching coil surface	1.428	0.639
F.P.M. air movement per sq. ft. face area of coil (properly bunkered)	12	16
Gr. moisture removed per minute per sq. ft. face area of duct (max. total)	17.3	17.8

Fig. 1—Design Factors Based on Actual Tests

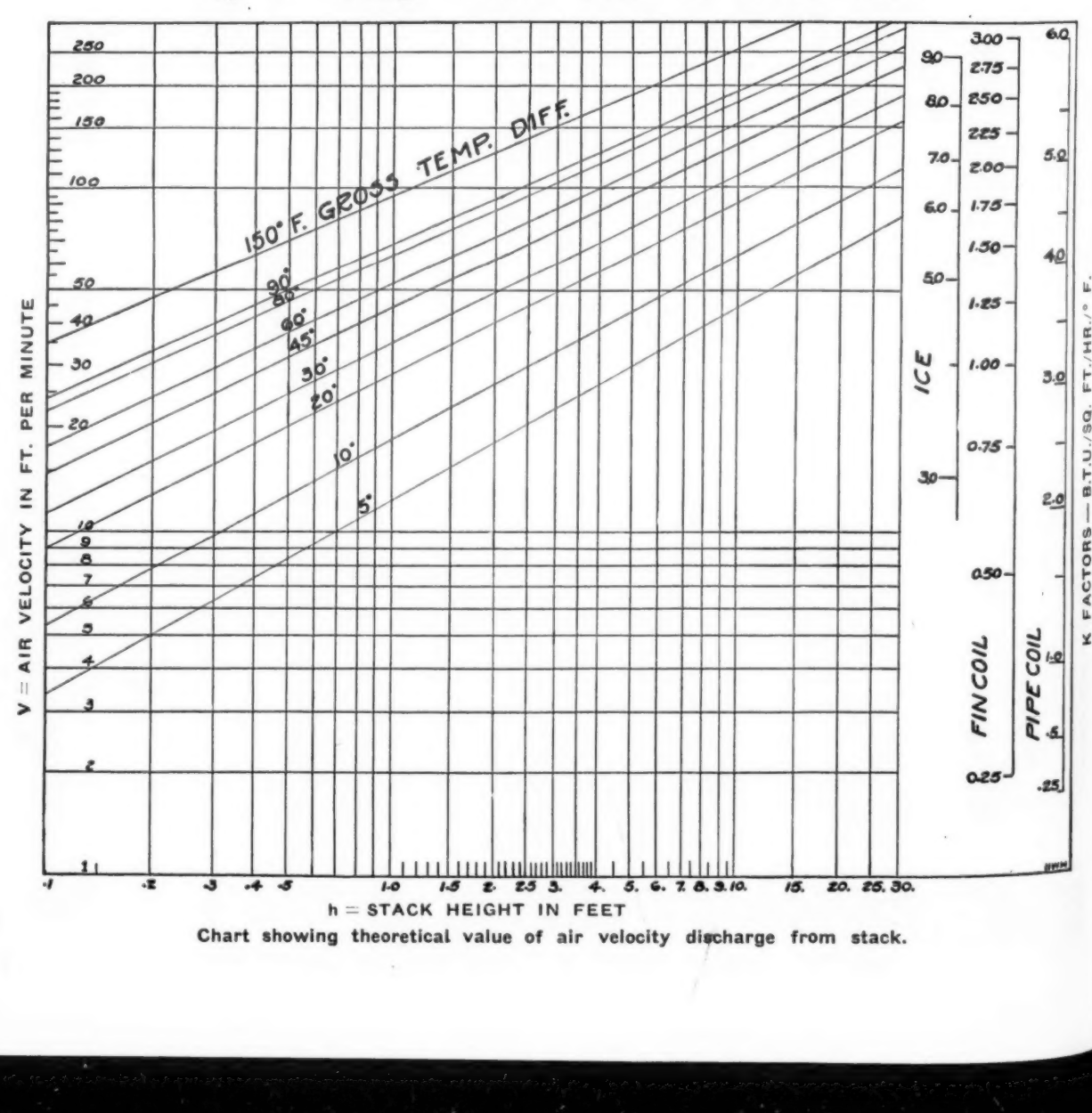


Chart showing theoretical value of air velocity discharge from stack.

Stack Effect and Its Possible Use in Coil Design & Installation

(Concluded from Page 14, Column 5)

than those actually observed and shown on Fig. 1. My conclusions on the "K" factors of the few surfaces studied were that the capacities varied nearly as the square root of the velocity. This conclusion was reached in spite of the recognized theories that the sensible heat transfer capacity of fin coiling varies as the .4 to .6 power of the velocity and the sensible heat transfer capacity of prime coiling varies as the .6 to .8 power.

One brief test seemed to indicate that the latent heat extraction varied as the .9 power of the velocity.

The above "K" factors, of course, refer to the heat exchange between surface and air. To all intents and purposes the "K" factor from surface to refrigerant may be considered as infinite in the present application.

Since the sensible heat extraction varies as the square root of the velocity and the latent heat extraction varies (as the .9 power) almost directly as the velocity, we have a very ready means of controlling the humidity in a cooler by simply controlling the velocity (by means of dampers in the stack). By this control of air movement both sliming and dehydration can be controlled.

MUST FIND LATENT HEAT

From the above it is obvious that in coil and bunker design both the sensible and latent heat loads of the "cooler" must be considered. The method of evaluating the sensible heat load is clearly known. In evaluating the latent heat load we must appraise both the moisture infiltration and the permissible and unavoidable moisture loss of the product.

The first cooler to which this theory was applied was equipped with wall coils, hence had no stack

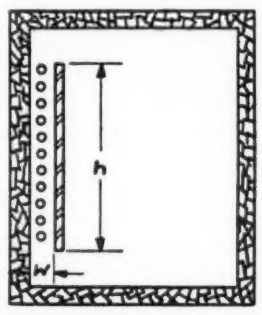


Fig. 2—Wall baffle and pipe coil.

effect. A baffle was placed before this coil to create a stack (see Fig. 2) and as a result the running time of the compressor dropped from 16 hours per day to three hours per day, and a very serious icing problem entirely disappeared. Also a very serious odor vanished.

The "K" factor measured in this case for bare pipe coils was 4.65 B.t.u. per square foot per ° F. per hour. The temperature difference between floor and ceiling dropped from 9° F. to a mere 1° F. Humidity rose from 55% to a new level of 86%. It is of interest also that meats were hung on the baffle, thereby increasing the actual storage capacity of the cooler.

Installing stack baffles in overhead "L" type bunkers produced equally surprising increases in the "K" factors of fin coils. In one case an

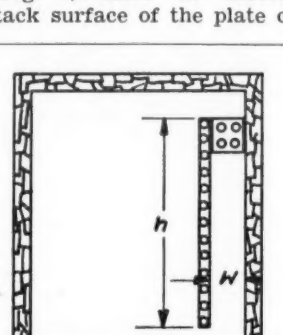


Fig. 3—'L' bunker and fin coil.

original "K" value of 0.5 B.t.u. (see Fig. 3) was raised to a new high level of 1.2 B.t.u. per square foot per hour per 1° F. (see Fig. 4).

Corresponding improvements in humidity, temperature, distribution, and odor level were also noted in this instance. In one case a dripping

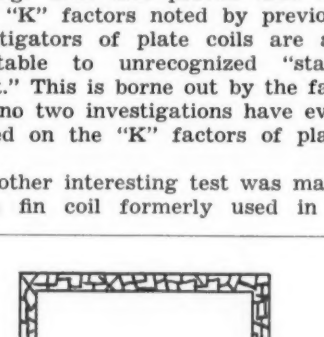


Fig. 4—Use of stack baffles on setup shown in Fig. 3.

ceiling dried off overnight. I now believe that wet ceilings are a result of still (sluggish) air or "confused" air.

Sensational results were secured when a plate coil was used both as a wall coil and also as the baffle for a fin coil located near the ceiling (see Fig. 5). Here "K" factors for the stack surface of the plate coil of

Fig. 5—Plate coil used as stack wall for fin coil.

3½ B.t.u. and for the fin coil of 1.9 B.t.u. were noted.

The reason for this improvement in the fin coil is that the plate coil offset the stack losses due to reheating. This test proved that the high "K" factors noted by previous investigators of plate coils are attributable to unrecognized "stack effect." This is borne out by the fact that no two investigations have ever agreed on the "K" factors of plate coils.

Another interesting test was made on a fin coil formerly used in a

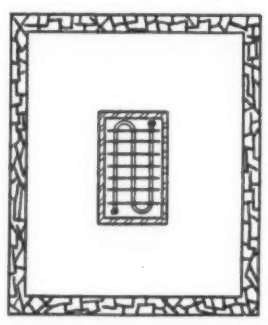


Fig. 6A—Fin coil in a central stack (plan view).

forced draft disc fan unit. This coil was installed in a central stack (Figs. 6A, 6B) and resulting capacity was ¾ of capacity formerly obtained by the use of a fan. While a small loss in floor space resulted, an enormous

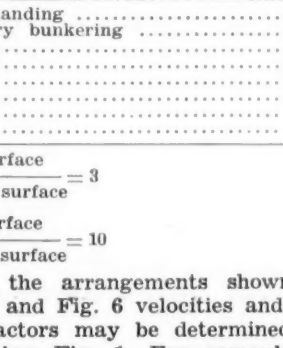


Fig. 6B—Fin coil in a central stack (elevation).

increase in useful storage volume resulted (as compared to overhead bunkers) and a valuable increase in wall space was gained by hanging meats around the walls of the stack. The net useful capacity of the cooler room in this case was actually greater than when a blower coil was used.

In one series of tests conducted on cast iron refrigerator sections[1] the per cent surface needed was as follows:

Stack Height in Inches	Surface Needed (%)
Free standing	27
Ordinary bunkering	35
18	22
20	20
22	18½
24	17½
26	17
28	16½
30	16
35	15
40	14½
45	14
50	13¾
55	13¼
60	13

In a similar series of tests on the ordinary fin coiling elsewhere referred to[2] results were as follows:

Stack Height in Feet	Surface Needed (%)
Free standing	80
Ordinary bunkering	100
1	78
2	63
3	58
4	55
5	52
8	43

[1] $\frac{\text{Fin surface}}{\text{Prime surface}} = 3$

[2] $\frac{\text{Fin surface}}{\text{Prime surface}} = 10$

For the arrangements shown in Fig. 2 and Fig. 6 velocities and coil "K" factors may be determined by consulting Fig. 1. For example: a fin coil of the type noted installed at the top of an 8 foot stack with 10° F. gas and 40° F. room would have an air velocity through it of 100 f.p.m. and a "K" factor of 1.85.

Charts similar to Fig. 1 may be constructed from experimental data for coils of various specifications other than those shown. Such charts will eventually be published by every coil manufacturer. In fact I confidently prophesy the issuance of a set for each type of coil, each set containing a separate chart for coils one, two, three, four, five, and six rows high.

NEW KIND OF SCALE

In the construction of such charts it is often more convenient to replace the "K" factor scales by per cent surface scales. By ready reference in this last case, we know what relation the square root surface of a certain type of coil should bear to the external surface of the fixture to be cooled. Such scales will run from 10% up to the present standard (for ordinary fin coiling) of 100%. Similar scales may also be constructed for ratios of lineal feet of pipe per cubic foot of cooler.

Stack coils can be designed to do the work of present coils having three times as much surface. Stack costs should be less than present bunker costs. The useful capacity of a cooler equipped with stack cooling is greater than by any other means of cooling. Standardization of installations is simple. Performance of stack coils is of a superior nature particularly with respect to circulation.

HELP OLD INSTALLATIONS

Many old installations may be "perked up" by a little study of "stack effect," and all new installations should take full advantage of its possibilities.

"Stack Coils" constitute an alternative for both "blower" and "gravity" coilings, often having the advantages of both and disadvantages of neither.

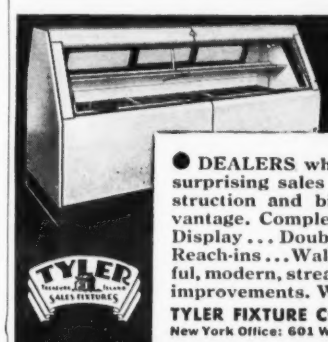
Stack coiling also offers possibilities of air conditioning without the use of blowers on the coils. The type installation shown in Fig. 5 seems particularly promising for air conditioning. The present progress in heating by combination of radiation and convection has shown that a very small amount of radiant heat transfer to or from the body has an astonishing effect on the comfort. In fact prominent heating companies insist that some radiant exchange is necessary to perfect comfort; hence we may assume that the same may be true in cooling.

Recently, Charles Herter has pointed out the effect of temperature difference on the "K" factor of free standing coils. This difference is merely a manifestation of the change in air velocity and can be most effectually stated in such terms. A complete precise statement also would include the absolute temperature or density of the air, but for ordinary accuracy this may be neglected.

The multitudinous values of "K" now given for various coil surfaces with "natural convection" are meaningless. Gravity coilings have ordinarily been rated at velocities which were apparently between 6 and 15 f.p.m. However, just what the velocity was, at rating, has been rarely measured and not stated if measured.

The velocity of the media must be stated in every case, or calculated from the stack height versus temperature difference between refrigerant and ambient. "K" factors can be stated only in terms of specific installation conditions; viz., "temperature difference," "stack heights," and "free duct areas." Or the condition must be specified as "free standing."

All present "K" factor data for natural convection should be redetermined to include the velocity factor.



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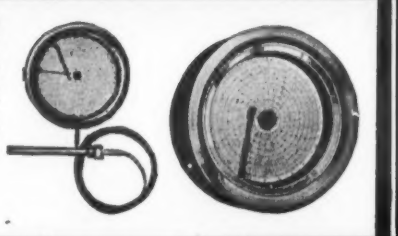

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